PHILADELPHIA, JANUARY 23, 1886.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON THE PRESENT SCOPE AND AIM OF ELECTRICITY IN MEDICINE.

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(Delivered to the Fourth Year Class.)

GENTLEMEN,—It is cause for congratulation that a therapeutic agent which has been so often misapplied by empirics and so generally abused by charlatans has been of late years so thoroughly submitted to scientific methods that it has attained a name for approximate certainty which is clearly excelled by very few drugs. That these severe tests have narrowed its realm and curtailed its prerogatives in many ways may be disappointing to the "electropath," but to the true scientist it is perhaps only an additional guarantee that what is known is genuine and what is discarded is false. The scope of the science is, in truth, not very ample. It includes, as its most striking feature perhaps, the results obtained in diseases of that neuro-muscular apparatus which is made up of the trophic cells in the anterior horns of the cord, the peripheral nerve, and the muscles of distribution. This apparatus forms an important half of that reflex arc which is the only nerve-organism of the lower forms of animal life. This fact would seem to suggest the propriety of testing these lower forms of life for identical results with those obtained in man, which would require a nicety of experiment to which our therapeutic instruments are not adapted. This subject suggests another query. Since the irritability of the cortex cerebri has been proved, and certain motor points seemingly established, would it not be well to have the qualitative and quantitative reactions of these motor points more thoroughly investigated, and especially with a view to any possible reaction of degeneration? The writer does not recall that in the experiments of Ferrier and others such investigations have been made.

The contributions of electro-therapeutics to the diagnosis and treatment of these trophic diseases alone merit for the science the respect and confidence of the profession, and remove from it the opprobrium of being the true handmaid of quackery. That we have an agent which will tell us, often before changes are visible, that the trophic centres are involved is a fact of obvious importance, as is also the fact that a hysterical paralysis can often by the same agent be ferreted out and distinguished from the far more serious anterior poliomyelitis. In this connection, however, it is well to emphasize an important point,—viz., that the abnormal reactions are, as their name signifies, the reactions of *degeneration*, and not merely of *paralysis*. Hence, in mild forms of peripheral palsy due to pressure or traumatism, it is not common to find the reactions of degeneration, because degeneration does not occur. I have very generally failed to find all the abnormal reactions in light forms of wrist-drop due to pressure of the head on the musculo-spiral nerve during drunken sleep. The changes observed in these cases have usually been a slightly diminished faradic contractility, and perhaps a somewhat prolonged contraction of the muscle to galvanism, results which are to be expected in healthy muscular tissue when cut off from nerve-influence. These conclusions are confirmed by several cases observed during the last fall.

The following case is an illustration of more serious peripheral paralysis:

M. G., middle-aged man, suffered from a pistol-wound which had been self-inflicted, by accident, near the elbow-joint. The ulnar nerve lay almost between the wounds of entrance and exit, and had been no doubt grazed by the ball. There was no paralysis at first, but very severe pain in the course and distribution of the nerve. Treatment by anodynes and local revulsives was ordered, but the patient soon became careless and absented himself from the hospital for a period of six weeks. When he returned, the limb presented the characteristic appearance of profound change in the ulnar group of muscles. The flexor of the wrist and deep flexor of the fingers were much wasted, the interosseous spaces were hollowed out because of the loss of the little interosseous muscles, and the inner margin of the thenar eminence was lessened by the wasting of the adductor of the thumb. The reactions of degeneration were marked. Faradic contractility much diminished, in some muscles perhaps abolished. To galvanism there was diminished response, long, slow contractions, and the

anode at closure produced more response than the cathode. Prognosis in this case was guarded, but in the main hopeful. The man has again absented himself. The treatment would have been galvanism, because that current alone excited the muscle to contract; but as soon as faradic contractility returned, this current would have been preferred as more stimulating to the muscles and more convenient to apply.

I believe faradism is more stimulating to muscles because of the mere mechanical effect of numerous rapidly-repeated irritations. It requires, however, a certain degree of activity in the nerve, as muscular tissue alone will not respond to it. Therefore in such a case as the foregoing it would be useless to employ it until repair had gone far enough to allow the injured nerve to regain influence over the muscle, as would be shown by the muscle responding to the induced current.

The following case illustrates the practical value of electro-diagnosis:

T. B., a negro, had paralysis of the facial nerve, with slight inequality of the pupils (but no ptosis or strabismus), also much vertigo and some deafness. There was grave suspicion of a syphilitic taint, and it was desirable to eliminate the possibility at least of cortical or meningo-cortical lesion. The reactions of degeneration were found in the facial muscles, which proves a peripheral lesion. The inequality of the pupils was found to have depended upon some eye-drops which a neighbor had given the patient, and which no doubt contained atropine; and the diagnosis was of syphilitic disease of the temporal bone, causing pressure on the facial nerve. In this case the electro-diagnosis, if not essential, was at least confirmatory.

In simple rheumatoid neuritis of the facial it has seldom been my misfortune to see a case advance to *total* abolition of faradic contractility. The Nervous Clinic at the University has presented three or four cases of the disease during the last fall, in all of which we had diminished faradic contractility, with quantitative increase to galvanism followed by decrease, and slight abnormal change in anodal and cathodal electrotonus. In these so-called *partial* reactions of degeneration I think it is sufficient for us to accept the facts without trying to explain them by elaborate schematic drawings, which are at best but theoretical. There may be a difference between myo-trophic and neuro-trophic centres in the spinal cord (?), but the fact did not appear until made necessary by the obscure phenomena of partial degeneration reaction.

In orthopædics it seems probable that much more use could be made of electricity for diagnostic purposes than is the custom, in our midst at least. The club-feet of children are doubtless caused by attacks of anterior poliomyelitis in limited areas, causing paralysis and degeneration of muscles, either separate or in groups. To understand the mechanism of these deformities, it is quite essential to know what individual muscles are involved, and not only what the exact action of these muscles is, but also the effect of their paralysis upon other muscles which have been to them diverse forces of resistance. To detect these muscles by electro-diagnosis would seem to be theoretically quite possible; but in practice there are obstacles which are not always easily overcome. The diffusion of the current to adjacent muscles is often a source of confusion: this is best overcome by using an olive-pointed electrode and by knowing exactly the motor points. Another source of error possibly is the fact that the disease is not far advanced, and we may therefore have only the partial reactions of degeneration above referred to. A difficulty is also found in the fact that some of the muscles are very deep seated. This is true especially of such muscles as the extensor proprius pollicis and the long flexors of the toes. I have found that a response is best secured in such muscles by applying the electrode along the tendon as close up to the muscular tissue as possible, just where it emerges from beneath the superimposed tissues.

There is a condition of muscle called subacute rheumatism, which is probably not rheumatic, but is more properly a myalgia, or, better, a subacute myositis. We have doubtless in these muscles nutritive changes which amount to a limited hyperplasia and which bind the muscle down. Such troubles are more often caused by over-use, strain, or direct injury than aught else, and the remedy for them in the chronic stages is, *par excellence*, faradism. It can be used by ordinary sponge-electrodes; and a tetanization of the muscle by the rapid interruptor is time-saving and perfectly harmless. The success of this treatment probably de-

pends upon the "breaking-up" of this hyperplastic condition. I have seen it act well in lumbago, while the patient amused himself with salicylic acid. It is especially serviceable about the shoulder-joint, as the following case testifies:

B., a professional base-ball player at "short stop," had severely strained his supra- and infra-spinatus and biceps muscles by a long throw. He had passed the acute stage, but the joint remained stiff and painful. The application of the faradic current as just mentioned gave relief from the very beginning of treatment.

It is customary to say that the galvanic current, especially the positive pole, is a remedy for neuralgia, and Billroth's wonderful case is made to do duty again as an example. I can only say that its use is often disappointing and never, in my experience, attended by remarkable results. It is sometimes palliative, however, and therefore worthy of trial.

The electrolytic and so-called catalytic action of the galvanic current is constantly attracting more attention. The good effects of this treatment are recorded in stricture of the urethra, in fibroid tumors of the womb, in the nutritive and inflammatory diseases of the female pelvis, and in aneurism. These diseases do not come within the range of neurology, but a few comments are not inappropriate.

Dr. Paul Mundé, in a recent paper, has recorded his observations with electricity in gynæcological practice, and it is interesting to note that his practical experience is in accord with theoretical data. Faradism is indicated most probably by reason of its stimulating effects upon muscular tissue, and hence has been found useful in cases especially of deficient development of the uterus, in subinvolution and displacements; while galvanism has benefited the hyperplasia following the various inflammations of the female viscera. In obstetrics it would be worth while perhaps to try faradism more frequently in premature and retarded labors and in some cases of post-partum hemorrhage. In the treatment of aneurism the criticism of De Watteville is all-important. He claims that failures result from not using a sufficient intensity of current, which ought to reach from forty to fifty milliampères in order to obtain the electro-chemical effects. These results could only be obtained, of course, by the use of a proper electro-motive force in reference to the resistance to be overcome, and by taking accurate measurements with a galvanometer.

The measurement of current-strength in the medical use of electricity is now a recognized necessity. We must no longer use our agent without measuring the dose. No results can be accepted as exact, especially in diagnosis, without a test of current-intensity. The difficulty was that our manufacturers were not able to give us a reliable "dead-beat" instrument at a suitable price. Several galvanometers are now offered; one of the surest of which no doubt is the Edelman, the price of which, however, is high. Mr. Flemming, of this city, makes one, after the pattern of Hirschmann, which he has had carefully tested at the Franklin Institute, and which he has found correct. It is now in use at the University Hospital, where it gives satisfaction. It is easily read, because of the vertical position of the needle, and is not an expensive instrument. It is not perfectly "dead-beat," and requires shunting by a system of pegs, which are its only disadvantages. A simple reference to Ohm's law demonstrates the use of this instrument. With a number of cells representing about 20 volts and a human arm, which has probably 2500 ohms resistance, we obtain, by dividing the force by the resistance, $\frac{20}{2500}$, which equals $\frac{1}{125}$ of an ampère, which is 8 milliampères—as shown on the dial of the instrument.

ORIGINAL COMMUNICATIONS.

REMOVAL OF THE UTERINE APPENDAGES.

Read before the Philadelphia County Medical Society, October 22, 1885,

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THE different conditions for which removal of the ovaries alone, or of ovaries and tubes, has been resorted to—most of which I shall advocate as warranting the operation, but in reference to some of which I shall raise a word of caution, if not of protest—may be classed under the following heads:

1. Diseases of the uterus.

2. Diseases of the tubes.
3. Diseases of the ovaries.
4. Disturbances of the general system, but especially of the nervous system.

Let us consider the last division first. It has long been an established fact that manifestations of abnormal nervous phenomena almost invariably are most marked at the menstrual epoch. Between such manifestations and the female sexual apparatus there is a close bond of sympathy. At the time of ovulation, the despondent are often most depressed, the irritable are most excited, and the hysterical, the epileptic, the maniacal, and the hypochondriacal insane each, usually, present in their most typical forms the evidences of their diseases. With them the congestion and hyperæsthesia pertaining to ovulation seem still further to unhinge the disordered nervous system. Undoubtedly, the process of ovulation does modify and usually aggravates functional or organic perturbation of the nervous system, and there can be no question but that hysteria, hystero-epilepsy, true epilepsy, or insanity may be determined or may be perpetuated by disturbed ovulation.

The removal of the ovaries, however, cannot be considered justifiable merely because abnormal nervous phenomena are most marked at the time of ovulation, even though the nervous disease is of as severe a type as epilepsy or insanity. It should be shown—at least there should be the strongest reason for believing—that the epilepsy or insanity is directly dependent upon the ovulation. The mere aggravation of the symptoms at the menstrual epoch is far from being a sufficient proof that ovulation has determined or is perpetuating the nervous disease. When ovulation merely aggravates the disease, the abnormal nervous phenomena will appear at the intermenstrual periods, and the exciting causes will be numerous and varied: anger, excitement, fatigue, indigestion,—one or more,—will awaken the attacks. If, however, epilepsy or insanity appear only at the menstrual periods, and not between those epochs, and this has been observed for months, and the periodical return has resisted other well-directed remedies, and there exist, as is usually the case, other evidences of disturbed ovulation, then there is, to my mind, a sufficient warrant for the belief that ovulation has originated the epilepsy or the insanity, and is perpetuating it. In such cases the disease will become more and more firmly established as time passes, and eventually will not be limited to the ovulation period.

Such cases are doubtless very rare; but they do exist. And in such, after having failed to secure relief in other ways, the removal of the ovaries is an obligation resting heavily upon the medical attendant. In such cases experience has shown that to stop ovulation is to stop the epilepsy or the recurrent insanity, for there are on record a few cases in which the disease has been apparently permanently cured by the removal of the ovaries, and the accomplishment of—to use Battey's words—"the great nervous revolution which ordinarily accompanies the climacteric."

I will go a little further in reference to these two most grave diseases, epilepsy and insanity, and claim that there are a few cases in which the uterine appendages should be removed, even though intermenstrual epilepsy or insanity exist. I refer to cases in which the type changes at the period of ovulation so as to present at that time—and only at that time—mania or homicidal tendencies. When an epileptic or an insane woman is harmless during the intermenstrual period and becomes a maniac or prospective homicide during the period of ovulation, the indication, amounting to an obligation, is to stop ovulation by the removal of the ovaries and tubes, other remedies having been duly tried. By so doing, one may prevent the recurrence of mania and of the homicidal insanity. In most instances, when the symptoms have shown the dependence of epilepsy or of insanity "upon ovaries viciously performing their functions," the ovaries at the time of opening the abdomen have presented evidences of organic abnormality, though such abnormal condition may not have been ascertainable by any examination prior to the performance of laparotomy.

Hystero-epilepsy is undoubtedly dependent largely upon an irritation of the nervous system reflected from the ovaries, especially at the menstrual nisus. But hystero-epilepsy is of much less serious nature than epilepsy or insanity, and is more amenable to treatment by means which in themselves bring no risk to the patient. Experience has shown that this

disease usually disappears in time, under well-directed treatment of mind and body. The hystero-epileptic, generally, in a few years becomes a useful woman, and possibly a mother. It is true she often transmits her nervous temperament, her nervous enfeeblement, to her offspring; but this fact does not justify the surgeon in rendering child-bearing impossible. While in some minds the removal of the ovaries may be justifiable in the confirmed epileptic or in the confirmed insane, in order to prevent offspring, yet there can be no question as to the indefensibility, if not criminality, of performing this operation with such a view in a hystero-epileptic.

Hystero-epilepsy, however, may be but one of several symptoms resulting from established lesions of the uterine appendages. In such a case Battey's operation is possibly demanded, because of otherwise incurable pelvic disease. The existence of hystero-epilepsy, then, does not of itself warrant the removal of the uterine appendages; and, on the contrary, its existence does not contraindicate the operation when other and sufficient indications exist for its performance.

In reference to the still less serious disease, hysteria, the unanimous opinion of prominent gynæcological surgeons, as shown in their writings, is that the disease, absolutely, does not justify Battey's operation; nor did Battey intend that his operation should be performed because of hysteria alone. Battey states very positively, also, that the operation should not be resorted to in the treatment of uncomplicated nymphomania, for the removal of the ovaries would not prove curative, not even palliative, of that condition, just as their removal does not lessen the normal sexual desire.

There are other systemic reflexes of ovarian origin which occasionally disturb the health to such an extent as to warrant the removal of tubes and ovaries. When invalidism has been established for years by reason of a nervous exhaustion dependent upon ovarian reflexes; when anorexia and persistent vomiting; when functional cardiac disturbance and enfeebled blood-circulation; when wakefulness and reflected neuralgias,—have established an invalidism that has resisted for years the most skilfully directed remedies within the patient's reach; when, as a result, the establishment of some fatal disease is pending,—then the removal of the ovaries and tubes will probably supplant invalidism and impending fatal disease with health and probably long life. Such symptoms justified, in Battey's mind, the performance of his operation, and his experience, with that of other surgeons, has proved the correctness of his *a priori* reasoning.

Careful examination, microscopically as well as macroscopically, has shown that, where ovaries have been removed by reason of serious failure of health dependent upon ovarian disturbance, the ovaries have not been normal, but have presented lesions that had seriously crippled their functions. It is, however, in reference to the performance of Battey's operation in the treatment of mental and neurotic diseases that it is necessary to raise a voice of caution and of protest. Let any one consult the reports of the operations for such conditions, and he cannot avoid the conclusion that this operation has in a number of instances been performed when neither the nature of the symptoms nor the benefits secured justified the procedure. It is to be expected that even able and conscientious surgeons will fall at times into errors when resorting to new surgical procedures; yet in some reported cases the operators have been blinded to the best interests of the patient either by reason of too great enthusiasm for abdominal surgery or by reason of too great, and hence unworthy, ambition for personal advancement. In the selection of a case for the operation one must exercise his most conscientious and most intelligent judgment. In reference to this particular resort to Battey's operation the pendulum has doubtless gone too far in the direction of surgical interference; yet to claim that the operation is never indicated in nervous or mental disorders is but swinging the pendulum too far to the other extreme. That some operators have removed the uterine appendages unwarrantably must not lead the physician to the conclusion that the operation is never warranted. In this matter, as in others, the general practitioner, as far as opportunity permits, must acquaint himself with the literature involved, and be prepared to give a fair and unbiassed opinion, so that while protecting his patient from the performance of an unnecessary surgical operation he may not stand in the way of the adoption of the only measure, in some cases, that

can restore health. The field for Battey's operation in psycho-neurotic diseases is certainly very limited. In a given case it is extremely difficult to determine whether the necessity exists for the operation or not. There are no hard and fast rules to be applied in endeavoring to reach a conclusion, and each case must be judged according to its own phenomena. In such cases Battey's operation must not be hastily selected: it can be justifiable only after numerous approved remedies have failed.

I do not intend to discuss those enlargements of the ovary, usually cystic, rarely solid, which lead to what by common consent is known as ovariotomy, but will briefly speak of those changes in the ovaries for which Battey's operation has been resorted to. Oöphoritis and peri-oöphoritis are the two processes which in most cases underlie the morbid anatomy of the ovaries. Acute oöphoritis rarely occurs except as a part of a pelvic inflammation in which either the pelvic peritoneum or pelvic cellular tissue is largely involved. The ovaritis is often masked by the more general pelvic inflammation. Such acute inflammation does not often call for removal of the ovaries, yet occasionally an abscess develops in an ovary, the surroundings of the organ being such that the abscess cannot be safely emptied without a laparotomy, and then the only rational (as it is the safest) method is the removal of the diseased ovary. An abscess of the ovary is the most dangerous form of pelvic abscess, for it is very apt to establish fatal peritonitis by rupturing into the peritoneal cavity, unless fortunately the pelvic tissues have been so matted together as to protect the peritoneum. The removal by laparotomy of an ovary containing an abscess causes the patient to spring almost immediately into a condition of health. Inflammation of the ovary and its surroundings may produce such changes within the ovary or on its external surface as, by reason of pain and numerous reflexes, to lead to invalidism of a permanent character unless the ovary is removed. Under inflammatory action this organ becomes enlarged and is displaced, usually posterior to the uterus, and becomes adherent to it. The ovarian parenchyma becomes so changed as to render the organ's function difficult or impracticable, and painful in either case. Inflammatory lymph-deposits may form over the periphery of the ovary so as to cramp and imprison the organ, and effectually to prevent the escape of the ova even if they should become matured. The tubes are apt to participate in the morbid process and to contribute to the local and systemic disturbances. The oöphoritis or peri-oöphoritis may have originated in an injury, in syphilis, in puerperal inflammation of septic character (frequently after abortion), or it may be after labor at any period. They are frequently sequels of gonorrhœa, and more rarely of an exanthem or of rheumatism. They may be acute in their earlier phenomena, or they may develop stealthily and not be recognized until local changes have become far advanced. It is true that the great majority of such cases, under judicious management and favorable circumstances, recover to such an extent as to place the performance of Battey's operation out of the question; yet there occur certain cases in which, by reason either of dyscrasia, mismanagement, or unavoidable errors in occupation on the part of the patient, the change in the ovaries and their surroundings becomes permanently established. In such cases invalidism becomes fixed throughout the years during which ovulation continues. Pain during and between the menstrual period becomes a prominent and distressing symptom. Locomotion becomes painful, the ordinary avocations of life cannot be followed, opiates are resorted to, micturition is interfered with, the nervous system suffers, and convulsive manifestations may appear. The prolonged interference with rest, sleep, exercise, and nutrition, and the resort to opiates eventually, lead to the development of anæmia and, later on, to probably fatal cardiac, or pulmonary, disease. Doubtless many members of this Society have seen such patients. In such is not Battey's operation, with its probably favorable result, to be preferred to years of invalidism and to the possible occurrence of an induced fatal disease? Must such a patient be doomed to physical and mental suffering? Must she be left to a life of uselessness and of invalidism? Here, too, in the selection of a case for operation, the surgeon must exercise that intelligence which comes from a faithful study of the subject, and he should be conscientious as well as skilful. In a much smaller number of cases the ovaries have been removed by reason of serious symptoms dependent upon a

degeneration in which the ovarian parenchyma seems to have disappeared almost entirely and numerous minute cysts formed. Rarely a condition of cirrhosis of the ovary has been the morbid change. Occasionally a hernia into the inguinal or femoral canal, into the sciatic or thyroid foramen, or by the side of the vagina, has necessitated its removal. Prolapse of the ovary, usually posterior to the uterus, sometimes into the utero-vesical pouch, has seemed to be productive of grave and obstinate symptoms in some instances, and has led to removal of the organ.

Mr. Tait has popularized the removal of the Fallopian tubes for diseased conditions of the tubes themselves. The alterations of the tubes for which their removal has been most frequently resorted to are hydrosalpinx, or accumulation of serum, pyosalpinx, or accumulation of pus, and hæmatosalpinx, or accumulation of blood within the tubes. I have mentioned these conditions in the order of their relative frequency. In either case both extremities of the tube become occluded, and distention has followed, often to the size and shape of a distended piece of intestine, in rare instances to the extent of containing several pounds of fluid.

It has been said that "all the diseased tubes must go to Birmingham;" but Mr. Tait exhibits the tubes he has removed, and also publishes his cases with such data that the most sceptical cannot but be convinced, both as to the much greater frequency of the morbid conditions than was suspected a few years ago, and also as to the advantages of removal.

Occlusion and distention of the tube result usually from a salpingitis itself arising from causes similar in character to those producing ovaritis, the most frequent of which is gonorrhœa. Salpingitis and ovaritis are apt to be associated, and either or both may be but a part of a general pelvic inflammation. Next to gonorrhœa, extension of septic endometritis is the most frequent cause of the salpingitis which precedes the occlusion and distention. The distention may, however, be dependent upon congenital malformation of the tube. The pathological condition of the tube not infrequently leads to permanent loss of health, or, as in the case of pyosalpinx, to fatal peritonitis from rupture of the tube and the escape of pus into the peritoneal cavity. It seems quite certain, from the observations of Mr. Tait, that in some cases of recurring pelvic inflammation the exciting cause is the rupture of a distended tube. Occasionally the tube may empty itself into the uterus, especially if the condition is that of hydrosalpinx. This fact explains the occasional sudden escape of fluid, usually serous, sometimes purulent or bloody, from the vagina.

The symptoms resulting from salpingitis, with occlusion and distention, are very similar to those produced by oöphoritis and peri-oöphoritis. In pyosalpinx the prognosis, both as to life and as to duration of the disease, is more unfavorable than in most cases of inflammation of the ovary, and ranking with ovarian abscess as to associated dangers. The only certain relief for occlusion with distention of the tube is in the removal of the tube. Amelioration of symptoms occurs when the fluid escapes into the uterus, but reaccumulation may take place from time to time, and symptoms may disappear only to reappear probably at short intervals, until invalidism becomes established.

Prior to the performance of laparotomy the diagnosis of diseased ovaries and tubes must frequently rest upon the symptoms alone.

In some cases one cannot by any method of physical examination determine the condition of ovaries and tubes. An exploratory incision through the abdominal wall then becomes essential to the completion of the diagnosis. A simple exploratory incision brings with it exceeding little risk to the patient. Still, in many instances an enlarged, displaced, or adherent ovary can be recognized as such by a careful bimanual examination under ether, and a distended tube can be recognized, especially through the rectum, as an elongated, sometimes fluctuating, tumor. Dr. Lusk reports that in one instance he mistook, in such an examination, an adherent and distended intestine for a distended tube. A laparotomy disclosed the error. His case illustrates the difficulties of diagnosis. Even if the physical examination should not determine the existence of an abnormality of ovaries or of tubes, and yet the symptoms are grave and intractable and point to pelvic disease, an exploratory abdominal incision is indicated. With one or two fingers introduced into the abdominal cavity, the condition of the uterine appendages can be ascertained without ma-

terial risk to the patient. In not a few instances, to wait until one can by ordinary methods of examination determine ovarian or tubal disease will be merely waiting for the abnormality to become so decided as to render surgical interference extremely hazardous or to be leaving the patient go unrelieved. In many cases the diagnosis is easy without exploratory laparotomy; in some cases a positive diagnosis is impossible without it.

When a Fallopian pregnancy has resulted in rupture of the tube, the indication is to make an incision through the linea alba, to ligature and to remove the affected tube, to control bleeding, to clean the peritoneum of blood, and to remove the fœtus. The fact that a few patients recover after symptoms of rupture of the tube in extra-uterine pregnancy should not deter from the performance of this operation. It seems quite certain that the number of such recoveries is very small compared with the number of mothers who die because of the rupture, although statistics are scarcely attainable. Autopsies and the experiences of a few surgeons show that the operation of ligaturing and removing the tube after rupture in Fallopian pregnancy would usually be a very simple procedure. At the period of pregnancy when rupture most frequently takes place—that is, at the second month—the cyst has not commonly formed adhesions, and there is no difficulty in stopping, and in avoiding, hemorrhage. Mr. Tait has operated in nine such cases,—*i.e.*, after rupture of the tube,—with only one death. It is to be hoped that American physicians will not continue to let such patients die without resort to the only rational and now well-established measure of relief.

To arrive at some conclusion as to the results following removal of the uterine appendages in the different diseases discussed, we must consider the prognosis in reference not only to the dangers attending the operation, but also as to the influence upon the disease or the symptoms for the relief of which the operation was performed.

When the appendages are removed because of reflex disturbances, as in epilepsy, there is almost no risk of death following the operation if the ovaries and tubes be free from adhesions. The more nearly normal the appendages, the less the danger of death after operation. Mr. Tait has operated six times for epilepsy, with no deaths; and he states that death ought never to follow such operations, the appendages and their surroundings being nearly normal in character. The operation, under such circumstances, is simple and quite safe in capable hands.

A few reported cases of operation for epilepsy and for mania seem to show the disease cured; in a larger number decided benefit followed; in others no relief. It is too soon to draw conclusions from the bare statistics of such cases, and I shall not submit a statistical statement. Some cases are apparently cured for a while, and the disease then returns; others seem but slightly or not at all benefited for months, and then greatly improve and seem to be recovering. The published reports in most cases do not give the remote effects upon the diseases. I draw, however, the impression that, in a very few judiciously selected cases, a cure of epilepsy or of insanity will follow Battey's operation.

A much larger number of operations have been performed because of inflammation of ovaries and tubes, including under this head cases of distention of tubes with pus, blood, or serum. Operations performed for these conditions bring risks to life varying greatly with the condition of the appendages and their surroundings. The dangers are relatively great when extensive, dense, and vascular adhesions exist, or when pus is present, as in pyosalpinx and in ovarian abscess, as in removal the pus may escape into the peritoneal cavity and fatal peritonitis result. However, Mr. Tait has operated in two hundred and one cases for inflammatory disease, with only ten deaths: a mortality of about five per cent.

The results secured by this skilful surgeon, though more favorable than those of most other operators, yet present, as nearly as can be obtained, the mortality inseparable from the operation. In studying less favorable statistics, the degree of lack of surgical skill becomes a larger element of uncertainty, and it is more difficult to determine to what extent the less favorable result is dependent upon the essential nature of the operation itself.

Hegar states that the mortality following his operations has been about sixteen per cent., and gives the mortality of other operators with whom he is acquainted at thirty-two per cent.

Dr. Mundé has tabulated one hundred and twenty operations by different surgeons, with a mortality of about twenty-two per cent.

When the appendages have been removed because of extensive disease, as occlusion and distention of the tubes, oöphoritis and peri-oöphoritis, with displacement of the ovaries and matting together of the appendages and surrounding structures, ovarian abscess, or Fallopian pregnancy, the effect upon the symptoms has been in nearly all cases very satisfactory, the patient being restored to good health. The benefit, however, is not always immediate, and it may be several months before the symptoms disappear. In some instances the local pains continue indefinitely. In such cases inflammatory action may remain in the pelvis after the removal of the appendages. The pelvic peritonitis or cellulitis so frequently accompanying ovaritis or salpingitis may continue in a chronic form, though usually such inflammation gradually and entirely subsides after the fluxion and hyperæsthesia of ovulation have ceased to recur. In some such unfavorable cases a pelvic peritonitis may have arisen because of the operation, and may occasion a continuance of pelvic distress.

The treatment of uterine myomata very frequently taxes to the greatest extent the skill and perseverance of the physician and surgeon. The most urgent and most distressing symptoms usually are hemorrhage and those due to pressure. The pressure-symptoms, though modified often by the location of the tumor, are usually in proportion to the size and weight of the myoma. The congestion incident to ovulation is usually the element that causes and aggravates the hemorrhage, that determines and stimulates the increase in size and in weight. When the natural menopause has become established, the periodical congestion of ovulation does not occur, and hemorrhage usually disappears, the tumor shrinks, and the pressure-symptoms become less pronounced. It is true such results do not always follow the natural menopause, but they usually do, and are to be expected, excepting in very large tumors probably, and in those of fibro-cystic character. The influence exerted by the natural menopause on uterine myomata led to the removal of the adnexa with the view of establishing an artificial or produced menopause. The removal of the ovaries and tubes for such conditions has been frequently resorted to during the last few years, and doubtless will grow in favor with the profession as the results become more definitely determined. Of course, there are very many patients in whom the symptoms are slight, and the question of the performance of the operation under consideration does not arise. That the mortality dependent upon uterine fibroid tumors, when not interfered with, is extremely low must not too quickly lead one to the rejection of this operation, though somewhat dangerous as to its immediate results, and though it is one rendering sterility certain. An operation which, while it brings a somewhat increased risk of immediate death, brings also great probability that health and a useful life will be substituted for years of illness and relative uselessness, becomes, I take it, not merely a matter of option, but a matter of duty, provided there is no less dangerous method of relief. The adnexa should not be removed either when the tumor or tumors can be removed without great risk, with the écraseur, by traction, and by enucleation, or when the hemorrhage and pressure-symptoms can be sufficiently controlled or ameliorated by other recognized measures.

In the *British Medical Journal* for January 31, 1885, Mr. Tait states that he has removed the appendages for uterine myomata ninety-nine times, with seven deaths: a mortality of about seven per cent.

Mr. Keith, in the same issue of that journal, states that he has removed both ovaries twelve times for myomata, with no deaths. Mr. Keith states that in only one of the twelve cases has menstruation continued, and in that case a portion of one ovary was unavoidably left. He also states that of upwards of sixty cases in which he removed both ovaries for disease, in only one did menstruation return regularly. The cessation of menstruation and the checking of hemorrhage occur, with very few exceptions, after removal of the appendages for myoma. Mr. Tait claims that this result will probably not be secured unless the tubes are also removed, as he believes that the tubes are more concerned in determining menstruation than the ovaries. The difficulties of the operation for myoma vary greatly in different instances, according to the position

of the ovaries, to the twisting of the tumor, and according to adhesions or the approximation of the ovaries to the tumors. These conditions cannot be determined until after the abdominal incision has been made. In some instances of attempted removal of the appendages, it has been found necessary to remove the uterus because of injury done to it during the operation; and in other instances it has been impossible to find the ovaries, they being embedded in the mass of myomata.

Compared with hysterectomy, or the supravaginal removal of the uterus, the result has been greatly in favor of the removal of the appendages. Yet Mr. Keith has reported thirty-eight hysterectomies with only three deaths: a mortality of about eight per cent. But he has removed the appendages for myoma twelve times, with no mortality. Mr. Tait has performed hysterectomy fifty-four times, with nineteen deaths: a mortality of over thirty-five per cent.—to be contrasted with his mortality of seven per cent. after removal of appendages ninety-nine times for myoma. He speaks of hysterectomy as a terrible operation.

The enucleation of large submucous or interstitial myomata is a grave operation, and, were sufficiently extensive statistics ascertainable, a very large mortality would doubtless be presented dependent upon it. It would be better, in some cases in which the symptoms seem to demand enucleation of such large growths, to resort to removal of the appendages, as being less dangerous and more likely to stop permanently the hemorrhage.

In very large tumors and in those of fibro-cystic character the removal of the ovaries seems to be of little, if any, service.

Dr. Battey, in his earlier operations, removed the ovaries through an incision in the vagina. More recently he has resorted to an incision along the linea alba. Unless one is positive that the ovaries are not adherent and not materially enlarged, the incision should not be made through the vagina; and, as the exact condition of the ovaries can rarely be ascertained with certainty before operation, it is best under all circumstances to perform a laparotomy, instead of operating through the vagina, when removal of the appendages is aimed at. It has been found that adherent ovaries and tubes cannot be removed easily and entirely through the vagina, and the operator cannot with certainty control the bleeding which accompanies the tearing up of adhesions.

After laparotomy, the operation of removal is very simple if the ovaries and tubes are nearly normal and are free from adhesions. The operation becomes extremely difficult when the appendages are matted together and are adherent to the bottom of the pelvis. In the hands of surgeons inexperienced in the details of abdominal surgery, the mortality attending removal of the appendages must continue high.

It adds but little, if at all, to the difficulties of the operation, to remove tubes and ovaries together; and as Mr. Tait believes, from his observations, that the tubes are important factors in determining menstruation and in determining what have been considered symptoms of ovarian disease, it becomes prudent to remove the tube with the ovary. It is now generally accepted that both ovaries should be removed, even though the symptoms have pointed to a diseased condition of one side only. In several cases in which an apparently healthy or nearly healthy ovary had been left, the symptoms, after disappearing from the side from which the ovary had been removed, had appeared and persisted on the side of the remaining ovary, and a resort to a second operation for its removal was necessitated.

Proper antiseptic precautions during the operation should be observed; *i.e.*, the operator should have clean hands, clean instruments, clean sponges, and clean ligatures and sutures. Only one assistant directly assisting in the operation is necessary. Corrosive sublimate may be used to render everything aseptic excepting edged tools. The spray has been discarded by most surgeons.

One should not render a woman sterile excepting in the relief of some grave condition. Objection to this operation based upon the fact that sterility is rendered perpetual is in many instances of little weight, as often sterility has already become established by the very condition demanding the removal of the appendages. It seems to be the general testimony that the sexual desire is not usually materially influenced by the operation. The sexual act, often previously painful or impossible, may, after recovery from the operation, be accomplished with entire absence of pain.

In a few instances excessive sexual desire has been noticed after removal of the ovaries: in such cases there have been organic changes in the uterus and its surroundings, and, these being remedied by the operation, the abnormal sexual desire dependent on these organic changes has subsided. After removal of the ovaries the woman's appearance becomes none the less feminine, and the only change it undergoes is that which follows restoration to health. There is no change in the voice.

There are a very few recorded cases in which maniacal or hypochondriacal insanity has developed after the operation,—whether because of the operation or not it is impossible at present to determine.

REPORT ON OPHTHALMOLOGY.

BY ALBERT G. HEYL, M.D.,

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THE INFLUENCE OF LIGHT ON THE RETINAL CELLS.

DR. TH. ENGELMANN has contributed (*Archiv Gesammte Physiologie*) some researches on the influence of light upon the cones and pigmented epithelial cells of the retina. The inner segments of the cones become shorter under the influence of light, but elongated in the dark. When the inner part contains a so-called ellipsoid this does not (or comparatively little) change in form. This is also true of the outer segments of the cones and the rods. It seems that only that part of the inner segments of the cones is actively movable which most resembles protoplasma and which lies between the membrana limitans externa and the outer segment. In this movement the moving part remains always in continuity with its cell-body in the outer granular layer. When it becomes shortened it gains in thickness. When it is elongated it becomes thinner in such a manner that probably no change in volume takes place. In this it corresponds with contractile protoplasma or muscular fibres. The absolute and the relative amount of change in length differ in different animals, and also in the same eye under the same conditions, being sometimes longer, sometimes shorter. The rapidity of the movement is such that in frogs (which have been kept in the dark) the cones previously stretched *ad maximum* after a few minutes of light-exposure are contracted *ad minimum*. The rapidity of movement is evidently of the same order as that of many forms of contractile protoplasma,—*e.g.*, of the pigmented cells of the skin, the contractile cells of the corneal epithelium, and especially the pigment-granules in the protoplasmic offsets of the pigmented cells of the same animal. The pigmented retinal cells undergo essentially the same movements as the cones, but they do not always contract or elongate with the cones. The cones may be contracted *ad maximum* while the pigment-granules have not changed their position, and *vice versa*. It seems that all parts of the visible spectrum can induce these changes. Whether ultra red or ultra violet can do the same is not yet determined. If one eye of a frog be exposed to the light and the other kept in darkness, the cones and pigment-cells in each will be found contracted *ad maximum*,—the only difference in the two being that in the exposed eye the outer segments of the rods were perfectly bleached, while in the unexposed eye they were as intensely tinted as if the frog had not been exposed to light. By repeating the experiments, it was found that this photo-mechanical operation of the pigmented cells and cones takes place with equal strength and at the same time in both eyes when one is exposed to the light, and that when shielded from the light both resume their former position. This, however, occurs only if the brain is uninjured. If this be destroyed, the retinal changes are confined to one eye. The author, therefore, thinks that this reaction must be brought about by nervous connections, and this is through the optic nerves, which, therefore, must contain not only centripetal fibres, but also centrifugal fibres, which act as motor nerves to the cones and pigmented cells. It is possible that in man the fibres of the anterior commissure of the chiasm may act as accessory conductors. Experiments on frogs showed, further, that it is possible, by excluding light from both eyes and exposing the back and posterior extremities to sunlight, to induce the contraction of the rods and pigmented cells as if struck directly by the light. Of course the outer segments of the rods were intensely tinted. One thing is certain, that it is possible to cause a reflex movement in the cones and pigment epithelial cells by the irritation of distant regions of the

body. Finally, the author shows that light is not the only agent which will induce these movements. The same effect as results from light may be induced by tetanizing frogs by strychnia. Curare did not diminish the reaction, nor induce it.—*American Journal of Ophthalmology*, February, 1885.

EFFECT OF COCAINE ON THE POSITION OF THE EYEBALL.

Dr. Baas has observed that after the use of cocaine the axis of the eyeball is directed directly forward. The eye seems involuntarily to assume the primary position. The patient is, however, able to change the position at will. In sleep and general narcosis, the eye has a tendency to rotate directly upward.—*Klinische Monatsblätter*, October, 1885.

THE EYES OF IDIOTS.

Dr. Schleich reports the results of the examination of one hundred and fifty-six idiots. Anomalies of the eye-muscles were seen in ten per cent. of the cases. There was one case of congenital ptosis, ten cases of strabismus concomitans, five cases of nystagmus (one of these had persistent hyaloid artery, and one, a microcephalic patient, had a coloboma of the optic-nerve sheath). The crystalline lens was clear in all the cases. The refraction examination showed a predominance of hypermetropia.—*Klinische Monatsblätter*, October, 1885.

A NEW OPERATIVE PROCEDURE FOR UNRIPE CATARACTS.

Wicherkiewiez reports the following method by which unripe cataracts can be extracted without awaiting the complete clouding of the lens. The danger in such cases is that a large amount of lens-substance is likely to remain within the eye in spite of every effort to remove it. The procedure of Foerster for the artificial ripening of the cataract, according to Wichenkiewiez, when the massage is lightly performed has little or no effect, while if energetically performed it may set up a great deal of irritation, bursting of the zonula, etc. Wicherkiewiez's idea is to remove as much as possible of the lens in the ordinary way, and then to wash out the remainder with an aseptic solution. He has had constructed for this purpose a glass receptacle shaped like a retort. The beak of the instrument terminates in a silver end of a size suitable for entering the anterior chamber; the flask has a vent over which the thumb can be placed and thus the atmospheric pressure regulated. The apparatus is filled with a solution of boracic acid, the end introduced into the anterior chamber, and the cortical washed out from underneath the iris into the pupillary space and into the wound. The author has operated eighteen times in this way, but considers this number too small to tabulate, but thinks the procedure will at least prove an advance in the antisepsis of the anterior chamber.—*Klinische Monatsblätter*, November, 1885.

ADHESIVE STRIPS OF GELATIN FOR CATARACT-EXTRACTIONS.

Galezowski, who advocates a corneal cut in cataract-extraction, suggests the use of gelatin adhesive strips for the closure of the wound. Convinced that corneal suppuration in many cases, at least, is due to infection with micro-organisms, and having operated with antiseptic spray and bandages, he conceived the idea that if the wound were sealed by an impervious covering the infection would be prevented. He employs for this purpose very smooth and soft gelatin strips about one-half millimetre thick. This strip contains a small amount of corrosive sublimate, and is moistened with a cocaine solution that it may be more easily applied. The strip is dipped in hot water and applied with a forceps to the wound, the lids closed over it, and a bandage applied. The strip melts gradually, and at the end of eight to twelve hours has disappeared. The complete coaptation of the parts takes place rapidly, and Galezowski has thus been enabled to leave the eye unbandaged at the end of the fourth or fifth day. He has employed the strip thus far in nineteen cases of extraction, in an operation for keratoconus, in an iridectomy for ulcer of the cornea. One of the cataract cases was complicated with suppuration of the lachrymal sac. At the desire of the patient, the extraction was made without previously curing the sac-inflammation. The case did so well under the gelatin strip that the bandage was removed on the fourth day.—*Centralblatt für Augenheilkunde*, November, 1885.

NEW INSTRUMENTS.

Agnew's Bident.—This is essentially two cataract-needles six-eighths of an inch

in length, joined together at one end, making a fork-shaped instrument,—the prongs, represented by the needles, being about one-eighth of an inch apart. The instrument has been devised for the removal of lenses dislocated into the vitreous. The needles, in the grasp of a needle-holder, are entered into the vitreous posterior to the lens, and by rotation the lens is brought forward into the pupillary space and the counter-puncture then made through the sclerotic. The lens, resting on the prongs of the bident, can be removed through the corneal section.—*Trans. of the American Ophthalmological Society*, 1885.

Discission Instrument.—Heyl describes an angular needle for operating on secondary cataracts. It is, essentially, the Hays needle bent at an angle, the principle being that, instead of acting by a pure lever-motion, the movement which rotates the needle communicates a cutting-motion at the same time. Practical experience has confirmed the utility of the instrument.—*American Journal of the Medical Sciences*, October, 1885.

An Electric-Light Ophthalmoscope.—Dr. Dennett has described an instrument in which the lamp (of about three-quarters candle-power) is introduced into the handle of the ophthalmoscope. This handle is hollow, and the light, proceeding through the tube, strikes the mirror at right angles, and is thus reflected into the patient's eye.—*Transactions of the American Ophthalmological Society*, 1885.

THE GONOCOCCUS OF NEISSER.

The micro-organism discovered by Neisser in gonorrhœal discharge is the subject of a monograph by Dr. Ernest Bumm. The following are some of the results based upon the examination of vaginal discharges and the conjunctivæ of newborn children. In the puerperal state an enormous development of the coccus takes place, more especially in women with chronic cervical gonorrhœa, which generally gives rise to so little disturbance that its nature is recognizable only by the microscope. In the conjunctiva the coccus is generally associated with other forms of micro-organisms. In simple conjunctival catarrh the coccus is absent. The coccus cannot force its way through an intact pavement epithelium. When a tissue in which both pavement and cylindrical epithelium exist together is infected, the line of demarcation between the two is marked. Study of the conjunctiva shows that the coccus forces its way through the epithelium into the underlying tissues; at the same time large numbers of white blood-corpuscles escape from the enlarged capillaries, and the epithelium is to a large extent destroyed. The cocci increase in numbers, and the second or suppurating stage is reached. On the fourth day the regeneration of the epithelium begins, and it is completed in about ten or twelve days. Dr. Bumm has succeeded in cultivating the coccus, and from a pure culture inoculated the healthy urethra of a woman, with the result of developing a typical gonorrhœal urethritis. Inoculation with gonorrhœal discharge freed from the coccus gave a negative result.—*Centralblatt f. Augenheilkunde*, November, 1885.

MYXO-SARCOMA OF THE OPTIC NERVE.

Prudden reports the following case. Carrie L., æt. 12, of good health and without history of constitutional taint, presents herself with exophthalmus of the left eye. The conjunctiva is hypertrophied and red, the cornea hazy. The pupil, moderately dilated, responds very little to light. A tumor can be felt behind the eyeball. Ophthalmoscopic examination shows a pink reflex, retinal vessels much diminished in size, optic disk very white. There is no perception of light. According to the history, the tumor has been growing for at least six years. The tumor was removed with the eyeball. During the operation the sheath, which seemed to be distended with fluid, was punctured, and a yellowish serum escaped. The tumor was pulled forward in order to remove every vestige of it. Troublesome hemorrhage followed, perhaps from the recession of the artery. The patient vomited a good deal, and this was accompanied by fresh flow of blood. The hemorrhage was finally stopped, but, after a lapse of five hours, set in with such violence as almost to lead to a fatal result. The tumor proved to be a myxo-sarcoma.—*Archives of Ophthalmology*, 1885.

BLINDNESS FOLLOWING ATTEMPTED TOOTH-EXTRACTION.

Swan Burnett reports the following case. A colored man, æt. 35, was operated on for cataract of the right eye with partial success. The left eye had perfect vision

for ten years later. About this time he went to a dentist for the purpose of having the left upper canine tooth extracted. Persistent but vain efforts were made to remove the tooth. The same evening the left side of the face began to swell, and the eyelids closed over the eye. Fever set in; abscesses formed near the inner canthus, the forehead, and cheek. When the swelling subsided, the eye was blind. Examination showed a white nerve and a number of emptied vessels resembling white lines running over the retina. The appearance of the fundus resembled very closely that seen in atrophy after erysipelas.—*Archives of Ophthalmology*, 1885.

THE ELECTRO-MAGNET IN OPHTHALMIC SURGERY.

The following is extracted from the review of Hirschberg's book on this subject in the *Archives of Ophthalmology*, vol. xiv. p. 426. The instrument used by Hirschberg is a magnetic machine, with zinc-carbon elements in a glass jar holding one litre. He renews the fluid from time to time, and always tests the energy of the current before using it. There is no need of the enormous machines proposed by Voltolini. Voltolini asserts that the click of the iron striking the magnet cannot be heard; but Hirschberg asserts that he has repeatedly heard it. Comparison of the magnetic extraction of iron from the lens with the old method shows that the former offers no special advantages over the latter, except that with the magnet the foreign body never falls into the vitreous. The removal of iron from the vitreous is the most important for magnetic extraction in ophthalmic surgery. The extraction may be made either through a meridional cut in the sclera or by a corneal section after extraction of the lens or after capsulotomy. A piece of iron is small for the vitreous chamber when it weighs from twenty-five to thirty milligrammes, and with such a piece of iron we may obtain perfect success, even at a late date. It is moderately large when it weighs fifty to one hundred and fifty milligrammes, and then only an early operation is likely to be successful. When it weighs from two hundred to five hundred milligrammes, the most prompt extraction cannot restore vision, and even the preservation of the eyeball is doubtful.

It is difficult to define the indications for operating. If we see a patient in the first stage, with a small piece of iron in the vitreous, it is best to operate without delay. If a scleral section must be made, we must etherize the patient,—the pain in removing the foreign body is said to be excruciating,—and choose a spot rather downward and outward than downward and inward. If an equatorial section be made, there is danger of collapse and total destruction. In making the section, a Graefe knife is plunged through the sclera several millimetres deep into the vitreous, and the scleral incision is enlarged to about six millimetres in length. The magnet is then introduced and allowed to remain several seconds, and then withdrawn. The danger of sympathetic ophthalmia is slight after using the magnet.

Hirschberg adds, "If, in the long list of extractions of iron from the vitreous with the magnet which I have performed in the last five years, I have succeeded twice in obtaining excellent vision, once a remnant of vision, and twice in preserving the shape of the ball, the difference in favor of this method will be more marked when I say that in the first ten years of my practice I never succeeded a single time in saving a trace of sight when I attempted the removal of iron from the vitreous by purely mechanical means." Hirschberg also gives an instance of a minute piece of iron being removed from the lens by a magnetized cataract-knife; and, in cases of minute chips in the lens, the effect of magnetized instruments is to be tried before resorting to the magnetic battery.

NOTES OF HOSPITAL PRACTICE.

PENNSYLVANIA HOSPITAL.

CLINIC OF J. M. DA COSTA, M.D.,

Professor of Theory and Practice of Medicine in the Jefferson Medical College, Attending Physician to the Pennsylvania Hospital, etc.

MALARIAL TOXÆMIA—ENLARGED SPLEEN TREATED BY ERGOT.

GENTLEMEN,—The patient before you is one whom you have previously seen. As he is about leaving the hospital, I thought it would be of interest to you to note the progress of the case as well as the results of treatment. He was before you on the 7th day of last month. He is the one who had the enormously-enlarged spleen,—whose system was saturated with

chronic malarial poisoning. He had, as you may recall his history, irregular chills for three months preceding his coming into the wards, on the 21st of last October, and even after his admission he presented at times these irregular evidences of malarial infection. He was treated chiefly with quinine given in amounts not exceeding sixteen grains daily, and occasionally with mercurials to relieve a tendency to constipation, but he did not improve greatly. It is true that the manifestations of malarial poisoning, in so far as the outbreaks of chills were concerned, disappeared, but the enlargement of the spleen was very little influenced; and, in addition to this, I find, in a note made on the 7th of last month, that "he has a sallow skin, yellow-tinged conjunctiva, and his liver is slightly enlarged; and the spleen extends from the sixth rib nearly to the ilium, and horizontally the dulness extends to within three inches of the median line." There was also some dyspnœa, and a trace of albumen in the urine. There was no indication of disorder of the heart. Upon examination of the blood no change was detected in the usual proportion of the white corpuscles, but there was an actual decrease in the red of about one-half. Therefore it was a case of anæmia of splenic origin due to the malarial poison with beginning leucæmia. I decided then to give him ergot,—a plan of treatment I originally employed several years ago and have found very successful. The quinine was reduced to tonic doses of six grains daily, and the fluid extract of ergot was given, a drachm three times a day.

The man has since then steadily improved. His tongue is clean, the lips are of good color, his conjunctivæ are clear, and his bowels are regular. The liver-dulness now has decreased to normal; but what will interest you most is the size of the spleen. The percussion-dulness, which formerly extended across to the ilium, I find this morning is not more than an inch below the border of the ribs; the upper limit of dulness begins on a line drawn two and a half inches below the nipple, at the lower border of the sixth rib, and extends to about two fingers' breadth below the margin of the rib in the left axillary line. Transversely, the dulness does not now begin until about six or seven inches from the median line, so that the spleen has been reduced to nearly its normal conditions. It would be still considered a slightly-enlarged spleen in a person otherwise healthy, but it is only a little larger than normal, and we say that practically the spleen has been restored to its normal size. The temperature throughout has been about normal, except during the chills. The blood was again examined two days ago, and it was found that the proportion of red and white corpuscles had been restored to the normal; in other words, the red corpuscles had doubled in amount.

That the cure in this case may be attributed to the ergot, there can be no doubt. It was not due to the quinine, because that had been given before, and in large doses, without producing the same effect.

How is the ergot best administered? I first began to use it hypodermically, but the patient objected, and finally refused to allow it to be given in this way. He then was given half a drachm thrice daily by the mouth, and in a week the dose was increased to a drachm of a trustworthy fluid extract, and his stomach has borne it well.

I will not say that I prefer the administration by the mouth: hypodermically it acts more quickly, and when I began my observations some years since I used it in this way. But I soon found, especially in children, that the internal method of administration was also efficient, although slower. Therefore I adopted the rule to use ergot hypodermically in adults when a rapid result is desired, and where time is of less importance to give it by the mouth. How does the ergot act? I think by a constringing effect upon the blood-vessels: the spleen being a very vascular organ, the ergot acts upon its blood-vessels, reducing their size. What strikes us here is the interesting physiological fact that, under the action of the ergot upon the spleen, the blood has become normal. We gave him no iron. As his spleen came down in size the blood improved, although since admission he has had none of the remedies which are supposed to act upon the blood and increase the number of red corpuscles.

The patient is about to leave us, and the question now before us is, Shall he continue his treatment? I do not think it really necessary, but he may take the following, chiefly for its strengthening effect:

℞ Cinchonidiæ sulphatis, gr. ij;
Extract. nucis vomicæ, gr. ⅛;
Rhei, gr. j. M.
Ft. pil.

He shall take one of these pills morning and evening. The effect will be tonic, and at the same time the pills will keep the bowels in a soluble condition, and thus prevent anything like abdominal fulness. If he will pay proper attention to his diet, and live in the open air, I believe he will remain in health, to which he is now restored; so that it will not be necessary to continue this treatment for a very long time.

A VERY SEVERE CASE OF CHOREA SUCCESSFULLY TREATED WITH HYOSCYAMINE.

I shall next show you a case which was one of the worst cases of chorea that I have ever seen in this hospital, or, indeed, anywhere else, but there is very little for you to see of the symptoms this morning, the boy has so much improved. The patient I am about to exhibit to you, and whose case I propose to make the subject of some clinical remarks, is a boy about 11 years of age. He has always been pale and weakly, and his friends, when he was brought here, said that he was always a very nervous child. Four weeks before the date when he was admitted (on the 14th of last month) he had an attack of acute rheumatism, which involved all the larger joints of his body. The rheumatism lasted about three weeks, but as it declined choreic symptoms began to be manifested. His hands and arms were first affected, and afterwards his legs.

When admitted, he was actually unable to walk; he was even unable to feed himself: in truth, the poor boy seemed in risk of starvation. He was wretchedly weak and emaciated. He could perform no co-ordinated movements with his arms or legs, and unless there was always somebody about to give him a drink of water and food he would have perished. This was not due to actual want of power in the muscles, but to the impossibility of performing any voluntary act requiring co-ordinated movements; yet when food was placed in his mouth deglutition was readily accomplished. When he came here he could not speak, he could not articulate a word. He could not put out his tongue, although he could open his mouth and move his jaws, but he could not ask for food. His expression was that of an imbecile, and he was reduced to a mere shadow. Indeed, I fear that you will hardly believe me, when you see him now, that he is the same boy whose history you have just heard.

When I first saw him, his arms and legs were constantly moving, both sides being equally affected. No power of grasp existed in his hands, though sensation did not seem impaired. He complained of pain when he was pinched. The patellar reflex was normal, and not exaggerated. No marked change in the electrical reactions was observed. His pupils were very much dilated; his pulse was only fifty per minute, and rather weak; there was a systolic mitral murmur heard at the apex. These are the main points in the case; but allow me to mention one or two more, so as to bring the case fairly before you as he was, before seeing him as he is. These involuntary muscular movements did not continue at night, when he was asleep. His urine has been examined, but neither albumen nor sugar was detected. His bowels tend to constipation. We detected the mitral murmur shortly after admission.

Gentlemen, here was a case of unusually violent chorea. There was general loss of power from want of control over the muscular movements. It seemed that unless we could give this boy rest he must rapidly perish. I have already told you that he was unable to feed himself, or even to express his wants.

The ordinary remedies for chorea act slowly; arsenic, though one of the best of our therapeutic agents for this disorder, acts slowly; it takes time, and the loss of time here might be fatal. I then recalled a case of tremor which I had seen rapidly influenced by hyoscyamine, the active principle of hyoscyamus niger. I concluded to try it here. I ordered him to take one-two-hundredth of a grain to begin with, a decided dose for a boy of his age; but, not finding any marked influence, I concluded that it would be advisable to increase the dose to the one-hundredth of a grain, given three times a day. Now the effect was admirable. From the first few days the boy began to improve, and at this time he had some dryness of the throat and wanted his mouth frequently moistened. He soon became brighter in his mind; he took more interest in what was going on; he moved voluntarily in bed, and tried to help himself

to food. His voice also returned, and he left his bed and began walking around the ward. After this his recovery was rapid and uninterrupted. He has had no other treatment than the hyoscyamine, and he has now so much improved, though he is still somewhat pale, that he may be looked upon as having recovered. He is sitting quietly; he has power over his hands, both in co-ordination and in grasp, although his grasp is still a little feeble. He walks and stands now without falling. His pupils are dilated, although not much.

The systolic apex-murmur persists: it is a chronic mitral regurgitant murmur. In every other respect the boy is nearly well.

Now, there are one or two points of clinical interest to which I would like to call your attention: first, some points which have nothing to do with the treatment; and, secondly, some which bear upon the treatment.

In the first place, this attack of chorea was clearly of rheumatic origin. It came on at the end of an attack of acute rheumatism. It is true that the boy was previously feeble and ill nourished, and that he was regarded as a nervous child; but the association of chorea with rheumatism is too close a one for us to regard it here as a mere coincidence. You can generally trace, in a case of chorea, a strong rheumatic element, either inherited or acquired. Occasionally you will get hold of a case just like this one, which I could easily duplicate from my experience In this form, before the patient has left his bed or his attack of rheumatism is clearly over, the chorea is manifested: which makes the connection still closer. Now, it has been thought that there is an embolic process at work in the smaller blood-vessels of the motor centres in the brain and spinal cord; small vegetations which are formed upon the valves are washed into the arteries supplying the motor tracts, especially the corpora striata, and the subsequent disturbances of nutrition give rise to the irregular, unco-ordinated muscular movements. This is a plausible and ingenious theory; yet I cannot think that it is sufficient to account for all the features of the disease. There must be some want of stability of the motor centres, independent of the coarse lesions resulting from embolism, the evidence of the existence of which, moreover, is not complete, and which is certainly not constant.

You noticed the extraordinary extent to which the manifestations of chorea have been carried in this case. He had no voluntary control over his muscles, and at the same time his mind seemed to suffer: he was almost an idiot. When admitted, his temperature was 98¼°: therefore the attack of rheumatism was over, and these symptoms were not due to a fresh outburst of the rheumatic affection. The want of power in these muscles must also be taken into consideration, as showing a close relation between chorea and paralysis.

Now, coming to the question of treatment, the influence of the hyoscyamine, which was suggested by analogy from the treatment of tremor, was here strikingly manifest. I have told you that the dose was increased from one-two-hundredth of a grain to one-hundredth of a grain without any bad effects; but when he was taking this quantity he complained of some dryness of the throat, although it never was so severe as to require us to reduce the dose again. On the 21st of last month the daily amount was reduced to two granules instead of three. It was finally discontinued two days ago. Now he is perfectly steady and can control his movements; his tongue is clean and he has a good color; he is gaining flesh: indeed, he may be considered as well.

Did the hyoscyamine produce the striking effect, or did the rest in the hospital do it? That rest is good in all and can cure many cases of chorea, is admitted; but the improvement here was too sudden—coming on in three or four days—and too great to be attributed entirely to the good nursing and the food which he received since he was admitted. It is claimed that hyoscyamine is a valuable antispasmodic and exercises a remarkable control over muscular movements; also that with the control of the movements the condition of the muscles is improved and all the functions increased. Even the blood has improved; for, though he is still anæmic, he is not so much so as he was. Within a week after beginning the treatment he was out of bed and walking around, but not so well as at present.

What shall be given further? Will not the condition remain? Not necessarily; for all the irregular muscular movements have ceased. He can take, however, for his anæmia, the elixir of the pyrophos-

phate of iron, a drachm three times a day, and stop the hyoscyamine as having accomplished its purpose.

RHEUMATIC MYOSITIS OF MASSETER MUSCLE.

I will now show you another case of interest. This one you will see at its height before any treatment has had much of an opportunity of influencing it. He occupies Bed No. 2 in the Men's Medical Ward. He states that he had never been subject to acute articular rheumatism. He is 26 years of age. Two years ago, he says, he had a peculiar attack, during which the right cheek was swollen and painful, and he remembers that he was unable to open his mouth: this lasted for one week. He had at that time several bad teeth, and he attributed the attack to them, although the swelled face was not associated with toothache, nor could he find any soreness in the teeth, nor indeed any change in them from what they had been for some time before. He then got well, and had no further trouble with his face until the present illness began.

Four days before admission (he came in on the 8th of the month), he had been exposed to cold, and at once the right cheek became swollen and painful,—in other words, very much the same kind of an attack as that of two years before. When admitted, he could scarcely open his mouth, and could not open it sufficiently to protrude his tongue when requested. The right cheek was tender, swollen, and painful upon pressure. There were points of tenderness at the articulation of the lower jaw and along the ramus of the right side; but the teeth were not tender. Although we found two which were decayed on this side, yet they had given no trouble for a long time. The right masseter muscle was found to be hard, rigid, and painful upon pressure. His temperature was 99°; his urine was 1022, acid, and did not contain albumen.

Now, gentlemen, here we had a very striking case; I speak of it as it was only a few days ago. There was great swelling, hardness, and tenderness of the right side of the face, which has somewhat subsided. He can now open his mouth a little, but complains of pain at the angle of the jaw. The masseter muscle is still rigid, but less so than at the time of his admission. He can now swallow, and the symptoms are passing away.

This case might well introduce an interesting discussion. When he came in, there was nothing to be seen in the mouth, the gums showed no signs of recent inflammation, and no tenderness was evoked upon bringing the jaws forcibly together. He had no distinct fever, but was feverish and restless at first; this has all gone. His tongue can now be slowly protruded; it is not coated. His bowels are regular.

I regarded this case as a peculiar manifestation of acute rheumatism, which here attacked the masseter muscle. This would produce rigidity and the difficulty in mastication already described. The only question in the diagnosis is with regard to the teeth; but I do not think that they have anything to do with it. The attack came on suddenly; it was very marked; and the teeth were not directly affected. I think we must look upon it as a local manifestation of a rheumatic condition of the system.

The only thing that we have done in the way of treatment was to administer hypodermic injections into the affected muscles of solutions of atropine and morphine, from which I have already obtained such good results in the treatment of spasmodic wry-neck. Under these the disease is rapidly yielding. He receives one-sixtieth of a grain of atropine and one-sixth of a grain of morphine once a day. He has had only two injections; but he has begun to improve. Dryness of the throat he has not complained of, but his pupils are seen to be a little dilated. No effect upon the pulse has been shown. The dose will be increased to the one-fiftieth of atropine, accompanied by the one-sixth of morphine, which to some extent counteracts the effects of the former. This will constitute the local treatment; while to remove the rheumatic element I will order him to take salicylate of sodium, fifteen grains every three hours, until he takes six doses, so that he shall take daily one drachm and a half. It can be mixed with a little spirit of lavender and mint water.

℞ Sodii salicylatis, gr. xv;
Spiritus lavandulæ comp., ℥x;
Elixir. aurantii, ℥xxx:
Aquæ menthæ pip., ʒj–℥xx;
Pulv. acaciæ, gr. j. M.

Sig.—To be taken every three hours until six doses have been taken in the day.

Continue the hypodermic injections.

TRANSLATIONS.

TREMOR AS A SYMPTOM OF CERTAIN CORTICAL CEREBRAL LESIONS.—In a recent series of experiments conducted in the laboratory of Vulpian, the method of causation of some forms of tremor was especially studied by Dr. Gasternatzvy. He had previously found that muscular trembling analogous to that observed in the human subject in multiple sclerosis (*sclérose en plaques disséminées*) appeared in animals when the antero-lateral columns of the spinal cord were injured, which in health usually transmit the impulses determining voluntary muscular movements. Proceeding to investigate the production of tremor when the spinal cord was not invaded, he found that under the influence of chloroform the excitability of the cerebral cortex diminishes gradually, and as the movements under the electrical stimulation become weaker, muscular trembling appears. He therefore attributed the muscular tremor to weakening of the psychomotor centres, especially since he found that the force of the faradic current had to be materially increased in order to obtain the same degree of response as before the anæsthetic was used.

These experiments seemed to the reporter to explain certain clinical facts, and to locate the causation of this form of tremor in the gray substance of the cortex of the hemispheres,—for instance, the tremor observed in patients afflicted with general paralysis of the insane. In fact, in this disease the essential anatomico-pathological lesion consists, in part at least, of a periencephalitis, and this leads to atrophy of the cortex of the hemispheres, with loss of the nervous elements and proliferation of connective tissue, production of pigment and of drops of fat. It is probable that these products remain to play the part of irritants to the other nerve-cells of the cortex, which have not as yet lost their functions. Besides, the paralytic tremor (one of the most important signs of this disease) itself furnishes some signs which show its dependence upon the gray matter of the cerebral cortex. First, since this trembling is general, and exists in all the voluntary muscles of the body, it shows that the lesion which provokes it exists in a part of the nervous system with which all these muscles are in communication, and the gray matter of the cortex of the hemispheres is precisely this region. Secondly, the paralytic tremor always accompanies the other symptoms, which depend incontestably upon certain lesions of the cortical gray substance,—for example, the symptoms of progressive dementia, analgesia, epileptiform attacks, and vaso-motor and trophic phenomena. Thirdly, at the commencement of the malady the tremor is scarcely discernible during slight, delicate movements, which are ordinarily the most complex and the best co-ordinated, and as the disorder gradually increases the tremor follows, until finally, in the last stage of the disease, the tremor leads to complete paralysis of all movements, either psycho-motor or voluntary. Consequently, there exists a relation between the paralytic tremor and the other symptoms of the disease on the one side, and upon the other with the progressive development of the anatomico-pathological process of the gray matter of the hemispheres of the brain, which constitutes the essential characteristics of the malady.—*Le Progrès Médical.*

LEPROSY.—Dr. R. Suzor, of Mauritius, contributes to the *Progrès Médical* (No. 14) some interesting points with regard to leprosy. As the question of the contagion of this disease has recently been discussed, he brings forward the results of some personal researches in the Mauritius, Réunion, Sandwich Islands, and British Guiana. He first notes the great increase in the number of cases occurring in the ten years after the institution of Chinese immigration. Previous to the year 1848 it had been very rare or unknown; in 1858 it had increased to such a degree that one-tenth of the population was leprous, reminding him strongly of the epidemic in Europe of leprosy in the Middle Ages after the return of the Crusaders. In Guiana the contrast is still more striking. Leprosy was unknown either among the natives or white settlers prior to the introduction of slavery. Among the negroes there were some afflicted with leprosy. Isolation was practised, and the disease was limited strictly to the blacks; but in 1831 more than four hundred were established in a settlement on the banks of a river near which some Indians lived. In 1842 a large proportion of these natives were affected; but it was only those belonging to the affiliating tribe to whom the disease had extended, and especially had it oc-

curred in children of this mixed parentage. At the present time two per thousand of the entire population are leprous, and the whites and mulattoes furnish their share, as well as the negroes and Indians.

Several cases are cited which acquired leprosy by consorting with lepers; and in one instance two children of healthy parents became leprous apparently as the result of having been vaccinated with lymph taken from a child belonging to a leprous family. This case was believed to furnish conclusive proof of the communicability of the disease by vaccination. A number of cases in children and adults are cited to illustrate the hereditary transmission of leprosy. The question is asked, May an affection which propagates itself by heredity, by contact, sexual intercourse, and vaccinal inoculation, and which makes its appearance most often upon the uncovered portions of the body, be considered as contagious or not? As well ask the question of syphilis, which is far from being contagious at all periods, and does not always lead to hereditary accidents. Further investigations will be made in order to isolate and cultivate the bacteria of leprosy in human serum, and to compare with it the growth of the bacillus of tubercle in the same medium. If pure cultures can be obtained, an opportunity may occur of making inoculation-experiments.

ETIOLOGY OF DUPUYTREN'S CONTRACTURE.—A peculiar case is reported by Dr. Lange, of Stettin, of a woman, who for years had had a contracture affecting the ring-finger of each hand to such a degree that the finger remained flat upon the palm when the others were extended. Both ring-fingers were equally affected. An apoplectic attack supervened, with left hemiplegia, and from that moment the affected finger became fully extended and remained so; and of the folds of the skin of the palm, which before were so marked, only traces remained; while the other hand retained its former condition until death occurred, several years later.

This case would support the view (which is favored by the symmetrical character of the affection in both hands) that the disease has its point of origin in the cerebral nervous system, and therefore disappears in paralysis. A local disease of the muscle, tendon, or peripheral nerves would not disappear so rapidly after the onset of the hemiplegia. The surgical indication is to weaken or suspend the nerve-supply, which will affect the other fingers less than the contracted one. Nerve-stretching or excision of the nerve-trunk might prove of service.—*Archiv für Path. Anatomie und Phys. und für Klin. Medicin*, October 7.

PNEUMONIA TREATED WITH MASSIVE DOSES OF DIGITALIS.—Petrescu, of the Military Hospital at Bucharest, reports remarkable success in the treatment of acute pneumonia from the administration of large doses of digitalis, given in the form of recent infusion. His conclusions, based upon observation of three hundred and fifty cases, are as follows:

1. Digitalis produces antiphlogistic and direct effects only when given in appropriate dose.

2. This dose is from four to six grammes (℥j–jss) given during the twenty-four hours, and continued for several days. In this way he has given as much as twenty grammes (℥v) inside of three days.

3. The treatment of pneumonia by digitalis is the only method at present of reducing the mortality of the disease to a minimum.—*Le Progrès Médical*, and *Deutsche Med. Zeitung.*

PRECAUTIONS AGAINST THE SPREAD OF HYDROPHOBIA.—A veritable epizoötic of hydrophobia having occurred in the department of Var, in France, it was made the subject of a report to the French Academy by Dr. Chassinat, of Hyères. M. Leblanc thereupon called attention to the law which compels owners of dogs or cats to destroy them on the first appearance of symptoms of madness, and requires local authorities to capture and kill all unregistered dogs found at large. It also forbids the sale for food of the flesh of animals which have been bitten by a mad animal until the expiration of at least six weeks. The Academy passed a series of resolutions calling upon the government to render uniform, generalize, and enforce the laws, and to postpone the abolition of the law forbidding empirics to treat animals affected with contagious diseases until July, 1887. M. Leblanc estimated that there are at least thirty thousand street-dogs in the city of Paris alone, which constitute a standing danger of the spread of hydrophobia.—*Journal d'Hygiène.*

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, JANUARY 23, 1886.

EDITORIAL.

THE ACTION OF THE COUNTY MEDICAL SOCIETY.

AT the stated meeting of the Philadelphia County Medical Society held on the 6th instant, for the purpose of electing officers, the regular nominations for delegates to the State organization and the American Medical Association were set aside and a new ticket introduced and elected by a proceeding without a precedent in the history of the Society.

Now that the meeting is over, and we review its proceedings, we feel that no one who was present can escape a sense of mortification at the disorder which prevailed during the discussion, if not of regret for the results of the ballot. It is true that, by the concerted action of one hundred and fifty members, the Society (whose entire membership is nearly five hundred) finds itself with a bad precedent established, and with a lively factional quarrel in prospect.

Let us see what was gained by this revolutionary procedure. Those having the matter in charge succeeded in having declared elected delegates whom no one will pretend to be better or more representative men than those discarded. They also had passed a resolution disapproving of the course pursued by the American Medical Association at New Orleans, and instructing the delegates to "endeavor to secure such modification of that action as may best conduce to the re-establishment of professional harmony and to the success of the Congress." On the other hand, they have raised a storm of feeling in the County Society which must inevitably react in the end upon the leaders of the movement, and thus inaugurated a state of affairs which all should deprecate as threatening the best interests of the Society.

The evident intention of those who substituted, in this hasty and irregular manner, an entirely new list of delegates (some of whom were not even members of the Society) was avowedly to send only those who would endeavor to carry out the plan set forth at a meeting of a few members of the profession interested in the International Medical Congress, held quite recently in this city,—to wit, "that the present Executive Committee should unite with the Original Enlarged General Committee, and recommence" (*sic*) "the organization *de novo*."*

We have no hesitation in declaring that such a hope is futile; it can never be fulfilled. The American Medical Association and the profession will not invite the members of the original Committee again to assume control of the organization of the Congress. The probable result of such a course is apparent from their record. Thus, on May 8, 1884, that Committee reported the following resolution:

"That it shall be the duty of the Committee to extend, on behalf of the Medical Profession of the United States, to the International Medical Congress about to meet at Copenhagen, a cordial invitation to have the International Medical Congress meet at Washington, D.C., in 1887."†

This resolution was adopted, and the sum of four hundred dollars appropriated by the Association to meet the preliminary expenses of this Committee, and the money was afterwards paid by the Treasurer.

On April 28, 1885, the Committee reported to the Association that they had "met at Copenhagen during the meeting of the International Medical Congress, and presented the invitation, which was accepted."‡ To this was appended a

* See page 223, *ante*.

† Journal of the American Medical Association, vol. ii. p. 565, 1884.

‡ Ibid., vol. iv. p. 549, 1885.

"Preliminary Plan of Organization," that was discussed by the Association, which declined to endorse or accept their appointments, as they had exceeded their authority. The Association thereupon expressed its disapproval of their action by appointing a new Committee, but courteously continued them as a part of the Enlarged Committee. From this action the original Committee rebelled; and now a few of its members decline to participate in the efforts of the remainder, who are striving to make good the cordial invitation accepted at Copenhagen.

The question naturally arises, Is the course of these physicians loyal to the profession that intrusted them with a mission?

THERAPEUTICS OF INFANTILE PARALYSIS.

THE treatment of essential paralysis in childhood is too often disappointing and unsatisfactory,—disappointing to the parents because, on account of the abrupt onset, they are not prepared to appreciate fully the gravity of the disease, and unsatisfactory to the medical attendant, who may find that in spite of his efforts an interesting and attractive child has become the subject of a terrible deformity and is possibly crippled for life. Routine treatment in such cases, too, is usually inefficient, and children are allowed to grow up with withered, shortened limbs, dangling joints, and consequent disfigurement. A plan of treatment, therefore, which was formulated recently by Dr. William Murrell, in a lecture delivered upon this subject at the Westminster Hospital,* deserves serious consideration, since it is based upon an experience extending over six years, during which period notes were taken of fifty-six cases of this disease, and in every instance in which the treatment was carried out actively and systematically the lecturer declared that "the best possible results were obtained." This expression is qualified because of the fact that most of them were not acute cases, and that some, at least, were of many years' standing, and clearly unfavorable for treatment.

The method pursued is, in brief, during the first or febrile stage, rest, aperients (Friedrichshall water is excellent for this purpose), milk diet (peptonized if necessary), with small doses of tincture of aconite (one-fourth of a minim) given every hour until three doses are taken, and every alternate hour for three more doses, then repeated every three or four hours until the temperature is normal. Convulsions, if present, may require bromides by stomach or rectum. In the second stage, the child is to be allowed to get up, and have a liberal diet. Small blisters or tincture of iodine should be now applied to the spine, and physostigma given in granules (of one-fiftieth of a grain of the extract), beginning with one three times a day, and increasing gradually until one is taken every three hours.

This should be kept up persistently for many months; but after the first six weeks it may be combined with small doses of phosphorus (one-two-hundredth of a grain or less). As soon as the acute symptoms have subsided,—that is to say, at the end of three or four days from the onset of the attack,—massage should be commenced and carried on systematically by an experienced and expert hand. Special stress is laid upon this point, for upon the skill of the *masseur* or *masseuse* will depend to a large extent the success of the treatment. It is to be applied not only to the spine and back, but also to the paralyzed limbs. The methods found most applicable are *effleurage*, *friction*, *pétrissage*, and *tapotement*. The number of sittings should vary from one to five daily, not too prolonged: these must be kept up for at least six weeks, and they may be required to ex-

* Lancet, December 26, 1885, page 1177.

tend to six months or more, with occasional intermissions. Galvanism to the spine and either the galvanic or faradic current to the muscles (applied to the motor points) is a valuable accessory; and likewise baths of sea-water, or pine-baths. Cod-liver oil, extract of malt, and syrup of the phosphates, or of the hypophosphites, are also capable of rendering valuable assistance in the treatment; while the personal hygiene (especially clothing the child in flannel) is of great importance. Hot sand-bags placed in bed on each side of the affected limbs are useful at night.

We have directed attention to this treatment because it is based upon sound principles, and it has been subjected to the test of experience by an able observer, who assures us that it deserves a trial by the profession.

LEADING ARTICLE.

BATHS IN SKIN-DISEASES.

IT is a singular fact that, during all the centuries in which mankind has been giving and taking baths, no one has solved the problem as to the penetration of water through the skin. The balneological treatises of ancient, mediæval, and modern times, so far as we have examined them, have contained assertions *pro* and *contra*, no doubt; but it is only very recently that scientific investigations have been undertaken with the view of ascertaining with certainty how far the skin is permeable by water and by substances in watery solution. The point is one on which argument is easy, but demonstration difficult. Some years ago the books used to give the case of shipwrecked sailors who are able, it was said, to assuage the pangs of thirst by keeping their clothing constantly wet with sea-water, the inference being that some water must be absorbed through the skin. Scientific investigation, however, having proved that under ordinary circumstances a great loss of water is constantly taking place through evaporation from the skin, it is evident that the arrest of such evaporation would alone account for the limited relief gained by saturating the clothing with sea-water. In like manner the advocates of the various mineral springs of Europe have described minutely the advantages gained in one disease by bathing in one spring, while a neighboring one of almost precisely the same chemical composition and thermal qualities is said to exercise quite a different effect and to be useful in an entirely different class of diseases. To read the books written in description and praise of the mineral springs of the world, a long and dreary list, we might imagine that for every possible ailment some specific spring gushes from the earth in plenitude of healing power. And yet, eliminate the conscious and interested false statements, allow for the almost universal tendency to quackery and the belief in "nature's own remedies" and "mysterious virtues," take into account the influence of salubrious surroundings, regulated diet and regimen, and the concomitant employment of internal remedies, and, finally, consider how far the virtues of the waters are in many cases due to their thermic qualities, the regulated action of heat and moisture upon the body, and we can judge how little room is left for the specific effect of any substances which may be held in solution, even if it were possible that these could force an entrance through the skin and be taken up by the system.

The action and effect of water and its vapor, or of substances in watery solution, upon the system at large, and especially upon the skin, has only been carefully studied of late years. German and French physiologists have examined into the influence of various baths on the nervous and vascular systems, and also as regards the absorption of medicinal substances through the skin, until at present we are in the possession of sufficiently accurate data to form a practical estimate of baths as medicinal agents.

The effects produced by baths upon the skin, which alone will be the subject of inquiry in the present article, are of several kinds. In the first place, the temperature of the bath, without regard to its contents, has a certain effect. Thus, lukewarm and moderately hot baths diminish irritability of the peripheral ends of the cutaneous nerves, and for this reason are peculiarly valuable in cases where general pruritus constitutes a prominent symptom

or perchance essentially the disease itself. General pruritus of an idiopathic character is nearly always relieved by warm baths, and, with this in view, the careful practitioner will not neglect the employment of so valuable an adjuvant to the treatment by drugs. One practical drawback to the use of baths in some forms of pruritic skin-diseases lies in the fact that water is irritant to the broken skin, and thus in eczema the excellent thermic effect is neutralized by the chemical action of the water. This may be avoided by medicating the water in two ways,—by the addition of some demulcent, as starch or gelatin, or of some chemical agent, as borax or sodium carbonate. The exact influence of these agents in modifying the effect of water upon the raw and inflamed skin cannot be stated with precision. In the case of the sodium carbonate it is probably due to some principle connected with the osmosis of the fluids of the body: the sodium-solution being of a specific gravity approaching that of serum, transudation is prevented. Such, at least, is the theory which has been brought forward.

In the intense dermatitis of burns, and in skin-affections like pemphigus, where the epidermis has separated and the patient is, as it were, flayed, the continuous bath as devised by Hebra gives great comfort and relief. Hebra's bath consists of a convenient tub of large size, with a bedstead hanging by pulleys, etc., so that the patient can be raised and lowered as desired. In case of extensive burns, the water is introduced at a temperature of about 90° F., which is as hot as can at first be borne. After a few minutes the patient feels cold, and then the temperature of the water is raised to 104°–108° F., which gives great comfort. The patient remains in the bath day and night, eating, drinking, and sleeping in it, and being removed only for stool. Although not preventing the tendency to death in severe burns at the beginning, it gives much relief in the later suppurative stages.

The question of the absorption either of water or of substances dissolved in water through the uninjured skin is one of great interest. It is known that the skin is permeable in both directions for gaseous substances, and also that both sweat and sebum pass outward through the pores. Whether, however, water or watery solutions can be absorbed is as yet undecided, although the weight of scientific testimony is against such a view. The numerous experiments which have been made in this direction have for the most part been wanting in scientific accuracy, as has been pointed out recently by Leichtenstern, a writer of impartial and scientific spirit. Leichtenstern, as the result of a collation of the most accurate experiments of others and of his own investigations, concludes that imbibition of water and of salts dissolved in water may occur in the bath so far as the superficial layers of the epidermis are concerned; but this imbibition is not necessarily followed by absorption. Indeed, it is probable that the water imbibed during the bath is shortly afterwards lost by evaporation. In any case, the amount imbibed is so small as to elude estimation by weighing or otherwise. Various circumstances may favor cutaneous imbibition of watery solutions,—*e.g.*, warmth, long duration of the bath (up to several hours), and removal of the sebaceous greasy matter with which the skin is normally endued, either by previous washing with soap, or by repeated baths, or by the addition of detergent substances to the bath. According to Leichtenstern, the palms of the hands and the soles of the feet imbibe water most readily, on account of the absence of sebaceous glands from these parts. True absorption, in the proper sense of the term, of water and of salts or other non-volatile substances contained therein, has never been proved to take place in ordinary baths, although numerous experiments have been made to prove such a fact and assertions to the same effect are frequently met with in balneological literature. Another point of importance to remember is that the excretory ducts of the sweat and sebaceous glands are not so constituted as to be capable of absorbing water. To read the twaddle of the popular hygienists would lead to the belief that the "pores" of the skin are great open conduits, gaping and swallowing all that comes within their reach. So far from this, the gland-ducts afford all the resistance that minute canals lined with epithelium and blocked with oily matters (the sweat, it must be remembered, is mixed with sebum) can offer to the penetration of watery fluids. It is true, indeed, that by friction a minute quantity of water can be pressed into the gland-openings; but certainly the quan-

tity is too minute to exercise any appreciable physiological or therapeutic effect.

In the case of gaseous matters, however, the facts are somewhat different, for certain gaseous and volatile matters dissolved in water are, under appropriate circumstances, absorbed through the skin. Sulphurous acid and free iodine are thus taken into the system by means of baths. On the other hand, it is a curious fact that free carbonic acid is not absorbed, except in baths particularly rich in this gas, and even then only in small quantities.

The bearing of these facts on the therapeutic uses of baths is obvious, for if no absorption can take place through the skin except through chance fissures or the mucous membrane of the anus and genitalia, then the administration of many salts and other drugs by this method with a view to their constitutional effect must be an exceedingly clumsy and for the most part inefficacious proceeding. For while minute quantities of these substances may doubtless be absorbed, as a matter of fact, by whatever channel they enter the body, yet surely the number of drugs must be small and the necessities of the case peculiar which can lead to this method of administration.

Restricting, however, the use of baths in skin-diseases to those affections where they may be employed with real advantage, we have still a large number of cases where these can be employed with benefit to the patient. The use of warm-water baths in allaying irritation of the peripheral nerves has already been pointed out. A further use is found in those more or less generalized skin-diseases, as ichthyosis, where we have diminished secretion. Here the heat and moisture induce further action of the oil- and sweat-glands, and the macerating action of the water softens the dry, rough epidermis and prepares the way for ointments and other emollient applications.

The simple warm bath or the bath containing sodium carbonate is useful in cases of skin-disease when it is desirable to macerate and soften the crusts and scales before applying remedies. No marked curative effect, however, can be expected in diseases like psoriasis, for example.

In scabies and other animal or vegetable parasites of the skin, advantage is taken of the imbibition of watery solutions to destroy these parasites by appropriate medication, as by sulphuret-of-potassium baths. The water penetrates far enough at most points to destroy the itch-insect, and renders other medication, as by ointments, easier. In the mercurial vapor-bath we have an instance of the macerating and softening power of water in preparing the way for the entrance of volatilized mercury.

The known fact of the absorption of corrosive sublimate in watery solution in the baths given syphilitic infants is apparently in contradiction to the fact observed in physiological experiment, that watery solutions are not so absorbed. How the facts can be reconciled we cannot at present say. Both have been abundantly verified, however.

As regards the particular skin-affections in which the administration of baths may be employed to advantage, this is not the occasion to enter into the subject. We have only endeavored to give the general indications for their use, and to point out the value of this mode of treatment intelligently applied, and the necessity of understanding what may be accomplished by baths—what they can do and what they cannot do—in the cure of diseases of the skin.

NOTES FROM SPECIAL CORRESPONDENTS.

PARIS.

NEW REMEDIES—Sparteine Sulphate.—The French medical world is at present in a state of excitement over the interesting subject of therapeutics, and we are able this month to give some details of the latest efforts made to introduce new remedies. One of the most recent is sulphate of sparteine, obtained from the broom-plant, *Spartium Scoparium*. Dr. Laborde, the chief of Professor Béclard's physiological laboratory, has made a number of experiments with this substance, and has discovered that it has a remarkable effect on the heart. In dogs to which were given doses of one centigramme, there was a considerable augmentation of the heart's action, and this result was not owing to any modification of the respiratory rhythm, because it continued after the animals were also given curare, so that he thought that the action of the drug was on the heart-muscle itself. Discovering that the sulphate of sparteine increases the energy of the heart's action without giving rise to toxic symptoms,

Dr. Laborde asked Professor Germain Sée to try it on his patients.

Dr. Sée thus reports on it: "Three characteristic and conclusive effects are the result of my observations. The first, which is the most important, is the quickening and renewed action of the heart and the pulse: in this it resembles digitalis or convallamarine, but its action as a cardiac tonic is very much more prompt than either of these, and more durable. The second effect is the regulation of the heart's rhythm that has been disturbed; and I believe that no other medicine can be compared with it for this purpose. The third result is the acceleration of the beat: this would be useful only in those cases of muscular atony with slowness of the beat: in this action it resembles belladonna. All these phenomena appear at the end of the first hour after the administration of the medicine, and the action maintains itself for three or four days after the drug has been discontinued. During this time the general strength is increased and respiration is easier: the urinary function alone does not seem to be influenced by the moderate doses I have used up to the present."

The sulphate of sparteine seems, then, to be applicable to some alteration in the heart: either when it has undergone an alteration in its tissue or has become incapable of compensating the obstacles to circulation. When the pulse is irregular, intermittent, and arhythmic, the sulphate of sparteine will rapidly re-establish the normal type. When the circulation has slowed up, the medicine seems to relieve this functional trouble, and at the same time it maintains and augments the newly-acquired force of the heart-muscle.

Terpene.—The principal objections to the employment of turpentine in medicine have been its insolubility in water, its odor, and its taste. The bihydrate of turpentine called terpene is exempt from these, and is now taking an important place in therapeutics. It has been used by Dr. Dujardin-Beaumetz and by Professor Germain Sée quite extensively. It is obtained by the hydration of turpenthène, which is a product of crude turpentine, at a temperature of one hundred and fifty-six degrees Centigrade. It is a white powder crystallized, and not a liquid, as often stated. It dissolves in two hundred parts of cold water, or in six or seven parts of alcohol. Its solutions have a bitter taste, but are not at all nauseating. Its characteristic chemical reactions are: nitric acid added to a solution gives an odor of hyacinth, and sulphuric acid gives a green precipitate; these reactions will show in the urine of patients taking the drug. There is still great dispute as to its action in health; but its effect on the patients who are ill is not contested. The administration of twenty to thirty centigrammes of terpene will augment the bronchial secretions and the expectoration. It is then an expectorant for use in subacute or chronic bronchitis. On raising the dose to eighty, or to one hundred, centigrammes (one gramme), terpene will provoke contractions of the vessels and also of the mucous membranes, arrest hemorrhage, and stop, or at least greatly lessen, bronchial secretion. It has checked very rapidly the hæmoptysis of commencing phthisis: so that in this dose it is a hæmostatic and a drier of bronchial secretion. (See on this subject an article by Dr. William Murrell on "Pure Terebene in the Treatment of Winter-Cough," in *British Medical Journal*, December 12, 1885.)

The following is Dr. Germain Sée's formula for its administration:

℞ Alcoholis (at 85), 250 grammes;
Aquæ, 30 grammes;
Terpene, 10 grammes. M.

Sig.—Three teaspoonfuls per day, to be given in lemon-syrup. It should be given with or directly after meals, to prevent any gastric trouble.

Hypnone.—We spoke of this substance in a late letter; but it has grown so rapidly in favor that it will be well to say something more on the subject. As before stated, it is a phenyl-methyl-acetone, to which Dr. Dujardin-Beaumetz has given the name of hypnone, owing to its decided hypnotic properties. It is now in constant use in all the hospitals, and the wholesale drug men are advertising it at ten cents a gramme. M. Dubois finds that patients submitted to its action before taking chloroform sleep much better. M. Laborde has made a series of experiments with it on animals, and finds that intravenous injections of the medicine rapidly produce sleep with anæsthesia and analgesia. Instilled into the eye, it produces local anæsthesia, but at the same time a most violent conjunctivitis.

The dose of hypnone is from six to eight drops, and the same, or even better, effects will be obtained from this dose as from two grammes of chloral or four grammes of paraldehyde. The hypnone needs alcohol at ninety degrees to dissolve it in rather a large quantity, so that M. A. Petit advises the following formula:

℞ Hypnone, 15 drops;
Alcoholis, 20 grammes;
Syrupi, 55 grammes;
Glycerini, 25 grammes. M.

Sig.—Each teaspoonful of this gives three drops of the hypnone. The remedy may also be given in capsules.

It is rather curious that for some time special attention has been directed to new hypnotics. We have now to speak of hopeine, extracted from hops, of which it is the supposed narcotic principle. We have also uréthane, which is a white substance, fusible at one hundred degrees Centigrade, easily crystallizable. All these, with chloral, paraldehyde, and still another, have close analo-

gies in their chemistry that are very curious, and will require a study of all the acetones, commencing with the ordinary acetone of acetic acid. The new remedy, hypnone, is obtained by dry distillation of a mixture of the acetate of calcium with the benzoate of calcium. The newest compound of this series is the benzophénone: this is obtained from the dry distillation of the benzoate of lime. It is in crystals of an amber color and an agreeable taste: it is now under experiment.

In regard to uréthane, it is now used very much in the German clinics by Von Jaksch, and by Sticker in Professor Riegel's clinic. It is a pure hypnotic, without being anodyne like chloroform or paregoric. It succeeds best in nervous insomnia, and calms the cough in phthisis. It is advised in one-gramme doses every half-hour or every hour, rather than in the massive doses, as given by some, of two to four grammes at once. Like the others of this series, it is well supported by patients, and the sleep produced resembles the normal physiological sleep. Certainly all this variety must afford a great relief to the tired morphia-eater.

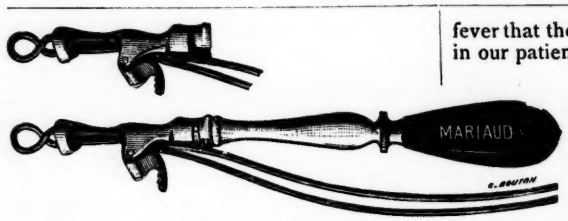
Dr. Desnos has just been studying some of our American plants, in particular the cholagogues and purgatives, such as baptisine, sanguinarine, juglandine, and phytolaccine, upon the human organism. He reports that "they are, all four, brown powders, having a salt taste, with an after-taste of bitterness. They are very hygrometric. I administered them in doses of five to ten centigrammes, under the form of plain pills. The baptisine is a resinous matter obtained by precipitation by water of the alcoholic tincture of Baptisia tinctoria. The sanguinarine is also a resin obtained from the Sanguinaria Canadensis. The Juglans cinerea of North America furnishes the juglandine, which is taken from the inner bark of the tree. The Phytolacca decandra, a beautiful plant of the United States, gives the phytolaccine. I tried it on seventeen patients in doses of ten to twenty centigrammes, and it seems to be the best of them all, provoking abundant stools containing a certain quantity of bile: in high doses it caused vomiting and depression. Baptisine, given in fourteen cases, was found to be a fair purgative, causing some colic; the juglandine about the same in the same doses, except that it seemed to cause irritation of the intestine. The sanguinarine, even in sixty-centigramme doses, gave only negative results. Phytolaccine is a reliable purgative: sure in its effects, without any inconveniences, it is an agent that should enrich the therapeutics of constipation."

Professor Vulpian has just made a report to the Académie de Médecine on the treatment of rheumatism by the salicylates. He stated that it is known that salicylate of sodium is efficacious in acute articular rheumatism and in acute attacks of articular gout, but its influence, however, is of not the slightest use in blennorrhagic rheumatism, and it is feeble in chronic and subacute forms of rheumatism. The salicylate of lithium seems to be quite as efficacious as the sodium in the first forms. In cases of patients treated by the salicylate of sodium, it often happens that after a rapid amelioration the joints remain tense and the use of the joints is still more or less constrained and painful. Now, even in doses high enough to be toxic, no further effect will be produced by the salicylate of sodium; and it is here that the salicylate of lithium will come in, and in a few days the last traces of the rheumatism will disappear.

The lithium salt seems to be quite as active in the treatment of those forms of acute rheumatism where the fibrous tissues are attacked, and it is more active than the sodium salicylate in the subacute forms of articular rheumatism that are progressive, and indeed even in many cases where salicylate of sodium has been faithfully tried. He had seen it fail, and yet, in a treatment of fifteen days, the use of salicylate of lithium led to complete success. In chronic articular rheumatism, when the joints may be more or less deformed and swollen, even half in a state of anchylosis, there will often be a marked improvement after the use of salicylate of lithium. In two cases of women at the hospital, they recovered the lost sleep and were able to move the limbs.

As in other medicines, there is a dose under which but little good will be obtained. For salicylate of lithium it is four grammes a day. Sometimes it will be necessary to give from four and a half to five grammes. When the improvement ceases, it will be sufficient to increase the dose fifty centigrammes. Intolerance will mostly come on at doses of five grammes to five and a half. He had seen some rheumatics resist a dose of six to seven grammes of salicylate of sodium that afterwards yielded to a dose of four grammes of salicylate of lithium. He therefore recommended the use of this preparation.

At a meeting of the Société de Médecine de Strasbourg, on the 3d instant, M. Koeberlé made a communication on an important simplification in the operation of hysterotomy by the use of an elastic ligator that Professor S. Pozzi, of the Paris Faculty, presented to the French Congress of Surgeons last summer. Dr. Pozzi's instrument is explained by the wood-cut on the next page. It is very simple, consisting of two pieces, which can be taken apart. The elastic cord is passed through, and, the button pressed, it is held in place. A simple turn of the instrument makes the cord cross, when it may be tied at leisure. Dr. Pozzi, in his interesting pamphlet on the subject of the "Technique of Elastic Ligatures," says that he prefers elastic cords, and not tubes. He uses round ones five millimetres in diameter. He regards the black as the



best kind. Dr. Koeberlé said, in regard to this method,—

"By the application of the elastic ligator of Dr. Pozzi, it is now possible to make but two ligatures (lateral) on each side: one in silk, placed outside the ovary across the large ligament, and the other wire, taking in the rest of the tissues up to the median line of the os uteri and the vagina. The wire ligature is placed after having first put the elastic one in. It is passed to each side of the fimbriated extremity of the broad ligament that has served for the attachment of the silk ligature. It can be transformed into a lost ligature after having excised the ovary on each side. The use of this elastic ligature with M. Pozzi's instrument, with a strong elastic cord, renders this operation so little serious, permitting any surgeon to make it, that now it is one of the regular operations of surgery."

M. Koeberlé did two hysterotomies with complete success. One of the tumors weighed eight kilogrammes (about eighteen pounds). In some sixty cases that were operated by M. Koeberlé, cure was the rule.

Professor Guyon, at the Necker Hospital, had an interesting case of vesical tuberculosis. He said, "I am about to perform the supra-pubic operation for a patient who is not one of the regular cases for that operation, as he has no stone in the bladder, but has tubercles there. The interest in this case is not only in the nature of it, but in the conditions under which we are obliged to interfere. The principal one is excessive pain, from which the patient has suffered for a long time without obtaining the slightest relief from any therapeutical means.

"This operation must be looked at from two points of view. First, does the nature of the lesion under which he is suffering permit us to make the operation or not? and, having resolved to do so, will it be of use to the patient? As to the first point, we must ask ourselves if the traumatism will not have the effect of doing more harm than good. This question was raised by Professor Verneuil, and it is of great importance, as operations on these patients have suddenly aggravated their general condition; but in this case it is not likely such a result will follow.

"The tuberculosis here is local, and it has been demonstrated that instrumental interference in such cases will often produce an amelioration and sometimes a cure. Experience has also shown that it is when there is fever that there is danger of after-trouble; but in our patient no fever is present. As to the question whether we are justified in operating, owing to the painful condition of the bladder, here we must state that this is a delicate question that is far from being settled. This is owing in great part to the number of cases in which the diagnosis of tuberculosis has been wrongly made, and where often a painful cystitis has been mistaken for it. The first thing to do, then, is to be sure of the diagnosis. Let us take the history of the case. A young man, 24 years of age, comes before us without any pathological antecedents and without any blennorrhagic troubles. That will exclude any chance of a local infection by contagion. The commencement of this was noticed when he was in the army, and found that he had frequent need to urinate (without pain, however). On being sent to the hospital, sounds were used, but without any benefit; on the contrary, it increased the difficulty, and he had pain, which was intense at the end of the act of micturition. He was obliged to rise fifteen to twenty times at night, and the pain was such that it felt like a knife cutting the urethra all along its course."

After coming under the professor's charge he was able with morphine to calm the pain for a time. When the clinical march of this trouble is taken into consideration, notwithstanding the fact that physical examination did not reveal anything, he did not hesitate to call it tuberculosis of the bladder, because the symptoms came without any previous exciting cause (such as blennorrhagia), without any constriction, without traumatism, without any foreign body in the bladder, and without any of the usual causes of cystitis, including hæmaturia. Examination of the urine took away all doubt, as a number of the bacilli of tuberculosis were found.

As to the danger in this operation, this is the third time that he had performed it in such cases. In the other two cases the cicatrization of the wound was only too rapid: it was followed by complete cessation of pain. The operation, then, offering no danger, is it useful? This is without doubt. After the bladder is open, he said, the manner of proceeding would depend upon circumstances. If the growth be not too extensive, he would endeavor to remove it as completely as possible. He would utilize Petersen's balloon, with vesical dilatation. In regard to this, the dilatation of the bladder must be made with great care, and the best test of this may be found in the behavior of the bladder: when the patient is sleeping profoundly under chloroform, the bladder must not resist the injection of small quantities of liquid. If it does, —if, notwithstanding the anæsthesia, it continues to resist,—then it must not be distended.

M. Pasteur is going on at a great rate with

his inoculations. The government officials have visited his place: they saw some forty persons operated upon, and after the visit they decided to present a bill to Parliament to furnish him with a proper building in which he can continue his experiments, so that before long there will be a hydrophobia hospital here. Patients are flocking in from all over the world, America giving her share. It may be stated, however, that M. Pasteur is only too glad to see others try his simple system, and, since the rabbit-marrows are sold to proper parties applying, we do not see why your surgeons do not try the system for themselves, instead of sending patients over here.

THOMAS LINN, M.D.

PARIS, FRANCE, December 18, 1885.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA ACADEMY OF SURGERY.

(Continued from page 291.)

A STATED meeting of the Philadelphia Academy of Surgery was held December 7, 1885, the President, Dr. D. Hayes Agnew, in the chair.

DIPHTHERITIC CASTS FROM THE URETER.

Dr. Thomas G. Morton also related the following history of a case. On the 5th of November last, a lad, 14 years of age, was admitted into the Pennsylvania Hospital with violent cystitis and symptoms of stone. At the age of four years he had been operated on for stone in Ireland, and a good-sized calculus removed. Since then, and until six months ago, he had remained well. He then experienced pain in the bladder, urethra, and at the end of the penis, and had frequent stoppage of urine, which was due to plugs of dense matter which lodged in the urethra or meatus, and he said that he experienced great difficulty in forcing them out, after which the flow of urine would be free.

On admission, he was very pale, feeble, and in constant suffering. The bladder was examined, and no foreign body was detected. He was given anodynes, placed upon the milk diet, and the bladder was washed out daily. The urine contained albumen, pus, and the fragments of membrane, which were constantly discharged or extracted from the urethra, and appeared to be tubes from which a longitudinal strip had been removed. A week after the first examination, the symptoms continuing, he was again etherized and the bladder examined, and, although no stone was detected, I decided to perform cystotomy. At the time of operation one of the plugs of membrane blocked up the meatus, and required some effort with a forceps to remove it. In the bladder I found about two tablespoonfuls of false membrane in a mass made up in part of incomplete tubes; and as this was adjacent to the right ureter, and as the patient had had some symptoms of discomfort in this and the kidney region, it seemed possible that these tubes were thrown off from the ureter on this side.

In the meshes of the mass of membrane removed there was a considerable deposit of calcareous matter, and numerous fragments of stone weighing probably four or six grains. The mass had likely been accumulating for a long time.

The bladder-wound has been kept open by a large silver tube, and injections used daily. The presence of the membrane has almost ceased, and little or no suffering is experienced. There were no symptoms, it appears, such as seen in diphtheria at any time in the course of his illness, although there was a hectic condition when the patient was first received.

DISCUSSION.

Dr. John B. Roberts: I have never seen a case in which tubes of this kind were passed. At a meeting of the Clinical Society, two or three weeks ago, a series of blood-casts from the ureter were shown. These of course were solid. They looked so much like worms that the woman at first supposed that she was passing worms. They had the appearance of earth-worms. They were examined, I believe, by Dr. Leidy, who pronounced them to be clots.

Dr. J. H. Brinton: The report of Dr. Morton's case has suggested one which I now have under treatment, and about which I am somewhat puzzled. Six or seven weeks ago a man of 36 presented himself to me with partial anchylosis of the left hip-joint: the thigh was turned inward, and flexion was arrested at an angle of one hundred and thirty-five degrees. He told me that he passed no urine through the urethra, but that all escaped through a series of openings extending from the groin far back into the perineum. There were nine of these openings, and more water passed through the posterior than through the anterior ones, although some time since a large quantity of water passed through the anterior channels. He had suffered much pain, and was greatly emaciated.

On examining the urethra I found marked narrowing at and behind the membranous portion; at the same time the presence of some hard foreign substance could be detected between this portion of the urethra and the neck of the bladder. A small lithotrite was then introduced, when I succeeded in extracting three or four portions of bone. These varied from three-fourths of an inch in length to the size of a grain of coffee. He then remembered that he had passed a piece of bone from one of these external openings. From the history furnished by the patient, it was evident that he had suffered from scrofulous

disease of the bones of the pelvis, and especially of the acetabulum, when a child. This condition had continued for twenty-seven years, the patient being better or worse at intervals. During the past two or three years the flow of urine through the urethra has been much interfered with, and during the last few months all of his urine has passed by the fistulous channels.

In view of the exfoliations and of the probable diseased conditions in front of the bladder, I determined to open up the parts by the median cut,—in this instance not strictly a median operation, since on account of the displacement of the parts due to the anchylosis I was obliged to cut in the line of a curved raphé. I then opened the membranous urethra, and, passing upward, reached a cavity containing pus and urine, and directed towards the left or diseased side.

This cavity was most probably the bladder distorted to the left side, bound down, and having suffered some loss of substance, or else it was a cavity or cyst formed in front of and communicating with the bladder. I had at first hoped that by treating the case as one of the median section for cystitis I could accomplish a cure; but the condition of the parts, as developed at the operation, seemed to me to obscure the prognosis.

Since the operation the patient has in some respects done well: his pain has disappeared, he has gained flesh, and generally he is in every way better. Locally, however, his progress has not been all that I could wish. The treatment has consisted in keeping the urethra well dilated by an india-rubber catheter,—at times kept in continuously, and at other times introduced at short intervals. The median cut has also been kept open, although a rapid tendency to heal is present. The patient can now readily retain his water for two hours. After that time it will escape; and although some urine passes by the median cut, yet it undoubtedly manifests a preference to escape by three or four of the posterior fistulous openings. None now passes by the anterior openings, those near the groin and on the front part of the thigh. When the catheter is introduced into the bladder a small quantity of purulent matter, say a drachm, sometimes escapes before and usually follows the flow of urine.

The President: It is probable that the bladder is tied down to the side of the pelvis, so that when it is empty that portion forms a little sac or diverticulum. If such is the case, it will be a difficult matter to cure it. In order that the bladder shall empty itself, it is necessary that it shall contract in all directions.

Dr. J. William White: The indication in such a case seems to be to keep a full-sized catheter in the urethra or the perineal opening all the time. The genu-pectoral position would also probably help to drain the bladder.

Dr. Nancrede: How would it do to make a supra-pubic incision for exploring the bladder?

Dr. J. H. Brinton: I have thought of that for a future operation.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Meeting of December 28, 1885.

The President, Daniel Lewis, M.D., in the chair.

PROLONGED LOCAL ANÆSTHETIZATION BY INCARCERATION OF THE ANÆSTHETIC FLUID IN THE FIELD OF OPERATION.

Dr. J. Leonard Corning read a paper on this subject. By experiment he had learned that, by shutting off the circulation from the part to be anæsthetized by hydrochlorate of cocaine, insensibility produced by the drug could be indefinitely prolonged. The reasons for this were not hard to conceive. We were thus enabled to reduce the constitutional symptoms to a minimum. Here were advantages not to be overestimated; for if, as in the ordinary method without incarceration of the anæsthetic, we inject a sufficiently-concentrated form to influence the general nervous system, there would be liability of establishing a change in the nerve-filaments of the brain and cord. In speaking of the very low percentage of cocaine which would produce anæsthesia when incarcerated, Dr. Corning had found a one-, a one-half-, a one-third-, and even a one-fifth-per-cent. solution of the cocaine to produce insensibility. A one-fifth-per-cent. solution, however, is too weak for practical use. For ordinary purposes, a solution of one-half to one per cent. is most desirable.

In order to avoid injection of the solution into the lumen of large veins, Dr. Corning applied a moderately strong rubber band around the limb, obstructing the return-circulation, and, having thus rendered the veins prominent, he mapped out their course with a soft blue pencil. This was the more important inasmuch as, after applying Esmarch's bandage and rendering the limb bloodless, preparatory for the injection, the course of the veins could not be seen. Having mapped out the veins, he rendered the part bloodless nearly up to the point of operation by Esmarch's bandage, then made the injection just below the margin of the tourniquet, which was tightened shortly after making the injection. At first, two to five minims of the fluid were injected just under the epidermis, and, having rendered the superficial parts insensitive, the needle could be made to penetrate more deeply without causing the patient more than trifling pain. The greater the extent of the operation, the weaker should

the solution be, if we wished to avoid producing constitutional symptoms. It was necessary to make the injections as rapidly as possible, in order to avoid deportation of the anæsthetic by the blood-stream before applying the tourniquet. The tourniquet should be applied just above the anæsthetic zone. The extent of the zone was measured by the æsthesiometric probe.

In cases of operations upon the face and parts of the body where the tourniquet could not be employed, Dr. Corning made use of hæmostatic rings. These made pressure upon the integument surrounding the field which it was desired to operate upon, and while they did not so completely cut off the circulation as did the tourniquet, still they incarcerated the anæsthetic sufficiently to permit of a severe and protracted operation without danger of constitutional symptoms from the amount of cocaine used.

Dr. Daniel Lewis, Dr. M. J. Roberts, and many others could now testify to the practical working of this method.

The PRESIDENT said the case referred to by Dr. Corning, in which he employed this method, was one of recurring epithelioma of the left shoulder. The incision made was three and a half inches long, and the skin was unusually thick; yet the patient experienced practically no pain during the operation, which lasted about forty minutes. The hæmostatic ring was used for incarcerating the anæsthetic.

Dr. M. J. ROBERTS had employed this method with satisfaction in exsection of the elbow-joint, of the hip-joint, in scraping out large abscess-cavities, etc. He thought the method marked a signal advance in anæsthesia.

THE TREATMENT OF PELVIC ABSCESS IN WOMEN BY INCISION AND DRAINAGE.

Dr. PAUL F. MUNDÉ read a paper on this subject, in which he said that in the majority of cases recovery took place after exudation following pelvic cellulitis and pelvic peritonitis, but in some instances a long period of time elapsed before complete absorption of the exudate occurred. In some cases the exudate broke down and formed an abscess. This was most likely to take place when the exudation was large and formed rapidly, and when the recuperative powers of the patient were below par. The majority of cases of pelvic abscess followed cellulitis, the minority followed peritonitis. In the cases of abscess referred to in this paper and following pelvic peritonitis, although the abscess really formed within the peritoneal cavity, it was practically shut off from that cavity, becoming, as it were, extra-peritoneal by the pathological changes which took place. Fortunately, the necessity for making a differential diagnosis between the two classes of cases, those developing in connection with pelvic cellulitis and those in connection with pelvic peritonitis, did not often arise.

From among four hundred cases of pelvic cellulitis and peritonitis of which he had records, only forty-eight terminated in pelvic abscess. Dr. Mundé thought that this percentage was larger than usual, because many of the cases, twenty-one, were seen in consultation. Twenty-three of the cases opened spontaneously; eight were treated by free incision and drainage (six through the abdominal wall and two through the vagina); in three cases there was instituted abdomino-vaginal drainage. All of the cases operated upon recovered. Dr. Mundé had seen only one case in which he thought the patient must necessarily die.

When he suspected suppuration in a case of pelvic exudation, he first proceeded to verify his suspicion by the introduction of the aspirator-needle. If only a small amount of pus was supposed to be present, he attempted to remove it by aspiration through the point of selection, usually in the vagina. If a number of small abscesses were suspected of being present, the aspiration was repeated until all were evacuated. Some years ago he reported eight cases treated in this manner, and since then he had so treated eight more, and in none had he had occasion to regret the procedure. In one, however, the case turned out to be one of dermoid cyst, and, had an incision been made in the first place, the true nature of the condition would have been earlier recognized. But it was not advisable to treat a case by simple aspiration if the abscess-cavity contained as much as three ounces of pus. Here the walls would not collapse and unite, but the cavity would refill with pus.

The treatment should be by free incision, in order to effect perfect drainage. Usually the spontaneous opening which formed in the rectum was too high up to be reached and more freely divided, and Dr. Mundé doubted whether the rectal opening should be enlarged anyway, for the contact of fæces would probably produce additional inflammation. If not treated, the patient might go on for years, with occasional discharges of pus through the opening in the rectum. But, if the spontaneous opening formed in the bladder, the drainage would be better than if it occurred in the rectum, and the wound would usually heal in a comparatively short time. A spontaneous opening through the vaginal wall, if small, might become obstructed by a clot or a fold of the mucous membrane, and prevent free drainage and union. The opening should be enlarged, the abscess-walls scraped, and, if necessary, a drainage-tube inserted. If the drainage-tube became irritating or did not effect complete drainage, the cavity should be injected once or twice a day with an antiseptic solution. Insufflation of iodoform was sometimes employed.

Dr. Mundé referred briefly to some of the unusual forms of pelvic abscess. The pus might find its way down to the perineum, or the point of fluctuation might be found at the crest of the ilium on one side. The abscess-cavity might be very large, containing more than a pint of pus, and there might be sinuses communicating with other collections of pus in the pelvic cavity. If fluctuation appeared near the crest of the ilium, the aspirator should be introduced, and, if pus were found, the grooved director should be introduced, and an incision made with a blunt-pointed bistoury. Then all sinuses should be explored. If the epigastric artery were divided, it should be ligated. As a rule, the freer the incision, the more quickly would the abscess heal. If pus had burrowed deeply into the pelvic cavity, an abdominal incision alone would not answer; it would be necessary to make a counter-opening through the vagina and establish thorough drainage. Daily antiseptic injections should then be practised. If the abscess were high up and adhesions had formed to the abdominal wall, the sac of the abscess being practically extra-peritoneal, drainage should be established through an incision, care being taken not to injure the peritoneum.

Dr. Mundé had embodied in his paper the histories of ten cases which he did not read.

Dr. W. M. POLK thought the paper a very good exposition of recognized methods for treating pelvic abscesses in women; he had, however, hoped to hear something new, especially with regard to the management of certain difficult cases which we come across in practice, and in which ordinary methods fail to obliterate the abscesses. Dr. Polk gave the physical signs and the treatment adopted in a case of deep pelvic abscess having no connection with the vagina, in which he made an abdominal incision and reached the abscess in that way. Although Dr. Mundé seemed disposed to criticise the procedure, Dr. Polk said he felt quite sure that even Dr. Mundé would not have discovered or reached the abscess through the vagina: other surgeons than himself had failed to do so. The mortality from pelvic abscess he thought was greater than was stated in the paper. There were some cases, he believed, in which numerous cavities and sinuses existed in the pelvic cavity, which rendered it impossible to stop the suppurative process which was destroying the life of the patient, in which he thought we would be justified in opening the abdomen, lifting the intestines out of the pelvic cavity, and incising the abscesses and sinuses. Dr. Polk pointed out the danger of wounding the uterine artery in making openings through the vaginal wall.

Dr. W. T. LUSK had also been led to suppose that the mortality from pelvic abscess was greater than had been represented this evening, and the need of a practical paper on the subject was evident. He had seen some cases in which the pelvis was almost riddled with abscesses, yet a cure was effected by thorough drainage. He was once very apprehensive on seeing a physician make extensive exploration through an opening in the vaginal wall for the purpose of breaking up the cavities and establishing drainage; but the patient recovered. The danger of mistaking pelvic abscess for ovarian cyst and other conditions was sometimes considerable.

Dr. W. GILL WYLIE thought most cases of pelvic abscess resulted, not from pelvic cellulitis, but from pelvic peritonitis arising from the Fallopian tube, its ligament, and the ovary. The tube became rolled backward and obstructed, and an abscess was liable to form which might either burrow downward and have for its walls the cellular tissue in the pelvic cavity, or extend upward and form an abscess in the peritoneum and cause danger of death from peritonitis. In exploring an opening in the vagina made by a pelvic abscess, he would not cut, but dilate, thus avoiding injury to the artery.

The paper was further discussed by Drs. Irwin, Putnam Jacobi, Fruitnight, and the author.

Dr. PUTNAM JACOBI had followed Dr. Mundé's instructions, laid down in a former paper, to puncture with the hypodermic needle in a case of supposed pelvic abscess following an acute cellulitis, but she feared the punctures helped to bring on the formation of pus. The question was, how early after an acute attack of pelvic cellulitis should aspiration be done in order to determine the presence of small collections of pus.

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held December 23, 1885, the President, JOHN A. WYETH, M.D., in the chair.

CARCINOMA OF THE STOMACH.

Dr. R. VAN SANTVOORD reported that the specimens presented at the last meeting as supposed specimens of multiple myoma involving the stomach, bladder, and rectum were found, on microscopical examination, to be carcinoma.

MULTIPLE URETHRAL STRICTURE; PERINEAL ABSCESS.

Dr. WACKERHAGEN presented the genito-urinary apparatus removed from the body of a man 45 years of age, who, twenty years ago, had suffered from gonorrhœa. No noticeable sequelæ followed until last spring, when the patient noticed a swelling in the perineum, and afterwards had a perineal abscess, frequent urination, and, finally, dribbling of urine through a perineal fistula. When Dr. Wackerhagen saw the patient in

consultation last November, three urethral strictures were discovered, the meatus urinarius was contracted, and there was phimosis. Circumcision and internal urethrotomy were performed, and nine days afterwards external urethrotomy. The patient died eight days after the second operation. There was no elevation of temperature until within a few days before death, and the highest temperature reached was 102° F.; there had been no chill. The autopsy revealed a laceration of the mucous membrane of the urethra, and between this and the prostate was a fistula leading to a perineal abscess with principal dimensions of two and a half by two inches. The cavity of the bladder was about equal to that of the perineal abscess. There was slight dilatation of the ureters, and in the left kidney were abscess-cavities.

The PRESIDENT said that he had a similar case under care, the only difference in the history being that his patient had had chills.

SYMPTOMS SIMULATING TUBERCULOSIS.

Dr. L. EMMET HOLT presented two sets of specimens, removed from children, which were chiefly interesting from a point of contrast. In the one case the child had distinct symptoms of tubercular meningitis, but the autopsy revealed no tubercles whatever; there was slight cirrhosis of the liver. In the other case the child was apparently in excellent health until within three days of death, but at the autopsy tubercles were found in the lungs, liver, spleen, and kidneys. During the presence of the cerebral symptoms in the first case four doses of quinine were given, and there was active dentition, which might partly account for the symptoms.

Dr. AMIDON said it was his firm belief that some cases of tubercular meningitis recovered. He referred to one which came under his observation, in which recovery took place during the use of heroic doses of iodide of potassium. There was diplopia, frontal headache, facial paralysis on the right side, excessive photophobia, and maniacal disturbance at night. The patient was an adult, and was in a condition of advanced phthisis, and, although her condition was not such as to justify heroic treatment, she was treated by the administration of what amounted to about an ounce of the iodide of potassium in twenty-four hours. She recovered entirely from the cerebral symptoms, and at the autopsy (the patient dying some time afterwards) not a trace of meningitis could be found. He had always regarded it as a case of tubercular meningitis cured. The patient had no history of syphilis. She had well-marked pulmonary tuberculosis.

Dr. VAN SANTVOORD remarked that in the case of children marked cerebral symptoms were very frequently coincident with other disturbances, and he had been so frequently disappointed with reference to diagnosis and post-mortem changes that he had refrained from making a diagnosis until he saw the lesion in the dead-house.

Dr. PUTNAM JACOBI said that the proximate cause of symptoms in tubercular meningitis was hyperæmia of the meninges and softening of the gray matter around the tubercles and immediately under the meninges. Thus we might suspect tubercular meningitis and it might be simulated by any cause which would produce hyperæmia of the meninges.

Dr. VAN SANTVOORD had been struck with the extreme latency of the course of tubercular meningitis in some cases. He recalled one particularly, in which the process was of weeks' and even months' duration, and gave rise to marked cerebral symptoms only a few days before death.

Dr. J. C. PETERS said he had never seen a fatal case of tubercular meningitis unless there was evidence of tubercles in other organs, and he also thought it was exceedingly rare for recovery to take place if there was tuberculosis elsewhere.

Dr. AMIDON remarked that a very trifling lesion in the brain could kill a patient, and that he had been obliged sometimes to hunt for lesions in order to find that which was the cause of death.

Dr. HOLT said it had always seemed to him not fair to assume that because a patient recovers it is not a case of tubercular meningitis, for we see recoveries from tuberculosis elsewhere, as in tubercular disease of the bones and pulmonary tuberculosis, and therefore we should never hesitate to attack one of these cases with the hope of curing it.

Dr. VAN SANTVOORD asked if, in cases of recovery from pulmonary tuberculosis and tubercular disease of bone, Dr. Holt would not expect to find some lesion at the autopsy.

Dr. HOLT said he did not wish to imply that there was no lesion, but that some trace of the disease would be found.

The PRESIDENT said he was acquainted with a case in which the patient, a man 43 years of age, was under Dr. Janeway's care, who considers that he is now suffering from tubercular meningitis and has been for a considerable length of time.

Dr. PRUDDEN thought it was dangerous to draw an analogy with reference to tubercular meningitis from the healing of lesions in the lungs, because the only way in which the pulmonary cure is effected is by the process going on to fibroid degeneration.

Dr. HOLT would like to direct attention to the occurrence of simple dysentery in young children. This was the third autopsy which he had made within two weeks in which there was simple dysentery disconnected with any other lesion in the intestine. Goodhart states that simple dysentery is extremely rare apart from lesion of the small intestines. In the two cases mentioned the dysentery was largely follicular.

Dr. VAN SANTVOORD had seen considerable dysentery in children, but it had usually been follicular; indeed, he did not recall a case in which he had seen croupous dysentery.

NEW YORK ACADEMY OF MEDICINE.

THE Annual Meeting was held January 6, 1886, A. JACOBI, M.D., President, in the chair.

The President read the names of a number of gentlemen who had declined nominations for office. At the close of the balloting, the following were declared duly elected:

Vice-President, Dr. Henry D. Noyes; Corresponding Secretary, Dr. Wesley M. Carpenter; Treasurer, Dr. W. F. Cushman; Trustee, Dr. George A. Peters; Committee on Admission, Dr. J. H. Emerson; Recording Secretary, Dr. A. M. Jacobus; Committee on Library, Dr. W. H. Katzenbach and Dr. Laurence Johnson; Delegates to the State Medical Society, Drs. W. R. Birdsall, R. W. Amidon, A. S. Hunter, W. E. Bullard, and Gorham Bacon.

CONTAGIOUS DISEASES IN ASYLUMS AND RESIDENTIAL INSTITUTIONS.

Dr. R. H. DERBY, of the committee appointed to make investigation with regard to contagious diseases, particularly eye-diseases, in asylums and residential institutions, said the reports of those physicians appointed to visit the institutions represented them in a less favorable condition than they were in June last. In three asylums in the city, containing collectively about one thousand inmates, there were near three hundred cases of contagious eye-disease. Overcrowding, bad drainage, want of place for quarantine, were noticeable. The committee recommended that the influence of the Academy be exerted upon the Legislature towards the passage of a bill which had been kindly drawn up by Mr. Gerry, of the Society for the Prevention of Cruelty, and of which the following are the essential features:

That every incorporated institution in this city receiving children shall have attached to it a physician whose duty shall be to examine every child before admission, and give a certificate in writing that the child is a safe and proper subject to be accepted into the institution, being without contagious or infectious disease, especially of the eyes. Any inmate with contagious or infectious disease shall be placed in quarantine for ten days, to be released then only on recommendation of the physician. It shall be the duty of the physician at least once a month to inspect thoroughly the entire institution and report to the Board of Health. The beds shall be separated by a passage not less than two feet horizontally, and free ventilation secured. The minimum amount of air for each inmate in the dormitory shall be six hundred cubic feet. Any official refusing to comply with this act shall be guilty of a misdemeanor. This act to take effect on the first day of July, 1886.

On motion, the recommendation was adopted and the committee continued.

The annual reports were then received. According to the Treasurer's report, there was a balance in the treasury of eight hundred and eighty dollars, and no debt. The entire number of volumes in the library, including pamphlets and medical journals, was twenty-seven thousand.

CHANGES IN CONSTITUTION AND BY-LAWS.

The most important changes made related to the abolition of the Committee on Ethics; the Committee on Medical Education was also abolished.

On motion of Dr. AGNEW, the following was adopted as a part of the By-Laws:

"The Council shall, on a written statement signed by the complainant and duly forwarded through the Secretary, take cognizance of any complaint against a Fellow. The Council may, after investigation, dismiss the complaint or transmit its findings thereon for further action by the Academy."

REVIEWS AND BOOK NOTICES.

VON ZIEMSSEN'S HAND-BOOK OF GENERAL THERAPEUTICS. In Seven Volumes. Vol. I. Introduction by PROFESSOR H. VON ZIEMSSEN. On the Dietary of the Sick and Dietetic Methods of Treatment. On the Koumiss Cure. Vol. II. Antipyretic and Antiphlogistic Methods of Treatment. Epidermic, Endermic, and Hypodermic Administration of Medicines. Vol. III. Respiratory Therapeutics. New York, William Wood & Co., 1885.

This work has been written for the well-educated and scientific physician, who will find in its pages much that is valuable and suggestive with regard to the nature and rational treatment of morbid conditions. In accordance with the teachings of modern medicine, which awards a high place to dietetics in the treatment of disease,—reviving the principles of the famous school of Salernum,—a treatise upon Dietary of the Sick and Dietetic Methods of Treatment, by Professor J. Bauer, and a chapter on the koumiss cure by Dr. Stange, with a general introduction to the work by Professor H. Von Ziemssen, appropriately occupy the first volume of the series. The food-value of each article is first considered, in order that a dietary may be constructed for special cases. With regard to the food-value of alcoholic liquors, the opinion is expressed that "their favorable effect in many diseases is satisfac-

torily explained if we regard them solely as excitants and stimulants,—those especially which contain no appreciable constituents other than alcohol and water,—and estimate their nutritive properties as insignificant."

Liebermeister, Jürgensen, and Eulenberg contribute the essays which constitute the second volume, on Antipyretic Methods of Treatment, Antiphlogistic Methods of Treatment, and on Epidermic, Endermic, and Hypodermic Administration of Medicines, respectively. At the present day, when so much attention has been directed towards the treatment of fever and inflammation, and when especially the scientific status of venesection is under dispute, and when hypodermic and epidermic methods of administration are largely practised, their able and systematic treatment will be gladly welcomed. The translator, Mr. Matthew Hay, of Aberdeen University, has added a note upon some new antipyretics, and has made suggestions which considerably add to the value of the work.

Respiratory Therapeutics, by Professor M. J. Oertel, constitutes Volume III., which has been translated, with notes and a preface, by J. Burney Yeo, of London. In this not only the therapeutics of diseases of the air-passages are considered, but also the respiratory disorders accompanying organic disease of the organs of circulation. The *modus operandi* of the various methods of treatment is fully considered, as well as the drugs required in respiratory therapeutics.

The publication of these volumes indicates a highly-satisfactory condition of modern therapeutics, which is now more than ever approaching scientific exactness of application. The volumes are illustrated and well printed. As a work of reference, this Hand-Book promises, when complete, to comprise everything of value within its scope, and well deserves to be found in every medical library worthy of the name.

THE PRACTICE OF PHARMACY: A Treatise on the Modes of Making and Dispensing Officinal, Unofficinal, and Extemporaneous Preparations, and Descriptions of their Properties, Uses, and Doses. Intended as a Hand-Book for Pharmacists and Physicians, and a Text-Book for Students. By JOSEPH P. REMINGTON, Ph.G., etc. With nearly Five Hundred Illustrations. Philadelphia and London, J. B. Lippincott Company, 1885. 8vo, cloth, pp. 1080.

This work is encyclopædic in fulness, and within the limits of a single volume comprises a pharmaceutical reference-library. The various subjects are considered systematically and compendiously in sixty-eight chapters, the work being divided into six parts for convenience of study and to facilitate reference. The technics of pharmacy and the various methods of manipulation are considered quite fully in the first part; while in the second the student is made familiar with officinal pharmacy and pharmacopœial methods. Part three considers inorganic substances, and part four organic drugs; extemporaneous pharmacy is treated of in part five; while the concluding part contains a useful formulary of unofficinal preparations. The work is profusely illustrated, and the book is well printed and bound in admirable manner, as becomes a work of reference. This book will find a welcome place on the book-shelf of every physician, as well as of every pharmacist.

A GUIDE TO SANITARY HOUSE-INSPECTION; or, Hints and Helps regarding the Choice of a Healthful Home in City or Country. By WILLIAM PAUL GERHARD, C.E., Consulting Sanitary Engineer. New York, John Wiley & Sons, 1885. Cloth, 12mo, pp. 145.

The English language, rich in the possession of the word home, contains many qualifying expressions, such as a happy home, the home of refinement, comfort, even of luxury, but the idea is rapidly developing in the community that health must take precedence of all other considerations, and that in order to enjoy life a healthful home is the prime necessity. The cause to which the melancholy fact that so many dwelling-houses have serious defects of construction is to be attributed is ignorance,—ignorance, especially on the part of the householder, of the requirements for safe habitation, and ignorance as well as cupidity on the part of the plumber and "skin builder." The present volume is a sanitary tract for the householder and sanitary inspector. The necessity of such inspection is made evident by a perusal of this work, which is clearly written, and contains advice which, if intelligently followed, will be worth many times its cost.

NEW BOOKS.

CLINICAL THERAPEUTICS. Lectures in Practical Medicine, delivered in the Hospital at St.-Antoine, Paris, France. By Prof. DUJARDIN-BEAUMETZ. The Treatment of Nervous Diseases, of General Diseases, and of Fevers. Translated by E. P. HURD, M.D. Detroit, Michigan, George S. Davis, 1885. Cloth, 8vo, pp. 491.

TABLETS OF ANATOMY. By THOMAS COOKE, F.R.C.S. Eng. Fourth Edition; or, Selection of Tablets believed to be most useful to Students generally. Longmans, Green & Co., London, 1885. For sale by J. B. Lippincott Company.

PRACTICAL NOTES ON THE TREATMENT OF SKIN-DISEASES. DISEASES OF THE PERSPIRATORY AND SEBACEOUS GLANDS. By GEORGE H. ROHÉ, M.D. Baltimore, 1885. 12mo, paper, pp. 62.

ELECTRICITY IN MEDICINE. Illustrated. By AMBROSE L. RANNEY, M.D. New York, D. Appleton & Co. Cloth, 12mo, pp. 147.

HOW WE TREAT WOUNDS TO-DAY. By ROBERT J. MORRIS, M.D. New York and London, G. P. Putnam's Sons, 1886. Cloth, 12mo, pp. 160.

PSYCHIATRY: A CLINICAL TREATISE ON DISEASES OF THE FORE-BRAIN, BASED UPON A STUDY OF ITS STRUCTURE, FUNCTIONS, AND NUTRITION. By THEODORE MEYNERT, M.D. Translated (by authority) by B. SACHS, M.D. Part I. The Anatomy, Physiology, and Chemistry of the Brain. Illustrated. G. P. Putnam's Sons, New York and London, 1885. Pp. 285.

BASIC AURAL DYSCRASIA AND VASCULAR DEAFNESS. A New System of Aural Therapeutics and Pathology. Also Notes on the Deafnesses. By ROBERT HOOPER, M.D. Ballière, Tindall & Cox, London, 1886.

CLINICAL NOTES ON UTERINE SURGERY. With Special Reference to the Sterile Condition. By J. MARION SIMS, A.B., M.D. Memorial Edition. Wm. Wood & Co., New York, 1886.

THE FIELD AND LIMITATION OF THE OPERATIVE SURGERY OF THE HUMAN BRAIN. By JOHN B. ROBERTS, M.D. P. Blakiston & Co., Philadelphia, 1885. 8vo, cloth. Pp. 80.

WOOD'S LIBRARY:

CLIMATOLOGY AND MINERAL WATERS OF THE UNITED STATES. By A. N. BELL, A.M., M.D. (October.)

DISEASES OF THE LUNGS. By PROFESSOR GERMAIN SÉE. (November.)

DISEASES OF THE BRAIN AND SPINAL CORD. By W. R. GOWERS, M.D., F.R.C.P. (December.) Wm. Wood & Co., New York, 1885.

WOOD'S POCKET MANUALS:

CUTANEOUS MEMORANDA. By HENRY G. PIFFARD, M.D.

VENEREAL MEMORANDA. A Manual for the Student and Practitioner. By A. MORROW, M.D.

MISCELLANY.

LODGING-HOUSE SANITATION.—The Board of Health in New York has been taken to task quite severely by the sanitary police for its failure to enforce the laws requiring a certain number of cubic feet of air for each lodger in the licensed lodging-houses of the city.

It is said that about half the houses are conducted with entire disregard of the law, and the Board of Health does little to enforce it. About three hundred judgments were obtained last year against persons for infractions of the sanitary laws of various kinds, but only three of these were satisfied. This remarkable result was brought to the attention of the grand jury some months since, and was criticised by them strongly; but still little was done to improve matters.

USE OF HYDRASTIS IN DYSPEPSIA.—Mr. A. G. Auld (in the *Lancet*, November, 1885, p. 885) speaks very positively of the specific influence of hydrastis in small doses in that form of dyspepsia common among females, where there is pain and sinking at the epigastrium, with nausea and constipation, associated with general debility, nervousness, wandering pains, and possibly leucorrhœa. The dyspepsia of phthisis and cancer is also amenable to the drug, as well as that form of indigestion resulting from alcohol. A very valuable editorial article on the use of hydrastis in various diseases is published in the *Brit. Med. Jour.*, August, 1880, p. 746; vide *Medical Digest*, Sec. 470: 3.—*London Medical Record.*

HYOSCYAMINE HYDROBROMATE, and also other products of Merck's laboratory, are imported and sold by Messrs. Eisner & Mendelson, of this city, who import from sixteen thousand to twenty thousand marks' worth of Merck's chemicals every month. This announcement is made in justice to an enterprising Philadelphia firm, because in a paper recently published in these columns it was implied that those who required these drugs would be obliged to go to New York for them. They are also to be found at our leading retail drug-houses.

LOCAL CAUSES OF FETID BREATH.—Chronic follicular tonsillitis, ozæna, and catarrh of the tongue are, according to McBride, prominent among the local conditions producing bad breath. The catarrh of the tongue which often accompanies dyspepsia may be successfully treated by applications of nitrate of silver dissolved in nitrous ether. Michel has recommended concentrated acetic acid for this purpose.—*Edinburgh Medical Journal.*

POST-PARTUM HEMORRHAGE.—In the *Lancet*, a correspondent writes that, being engaged to attend a patient who was accustomed to severe flooding after labor, he gave, in anticipation of hemorrhage, five grains of gallic acid twice a day for three weeks. So soon as the placenta came away no more blood was lost, though in previous confinements almost fatal flooding had followed, in spite of every treatment.

NEU-YORKER MEDIZINISCHE PRESSE.—A new monthly medical journal has been started in New York, as the special organ of the Medico-Chirurgical Society of German Physicians of the City of New York and Vicinity. It is ably conducted, and will be welcomed by German physicians.

AN extract from Ziemssen's Cyclopædia, by the celebrated Professor Juergensen, on Catarrhal Pneumonia, as appearing in advertising columns of this issue, may be of interest to our readers.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM JANUARY 3, 1886, *TO JANUARY* 16, 1886.

COLONEL THOMAS A. MCPARLIN, SURGEON.—Now awaiting orders in New York City. Ordered for assignment to duty as Medical Director Department of the Platte, on January 24, 1886. S. O. 5, A. G. O., January 7, 1886.

MAJOR CHARLES E. GODDARD, SURGEON.—Died at Fort Yates, Dakota Territory, January 4, 1886.

CAPTAIN CURTIS E. MUNN, ASSISTANT-SURGEON.—Ordered from Department of the East to Department of the Columbia.

CAPTAIN WILLIAM C. SHANNON, ASSISTANT-SURGEON.—Ordered from Department of the Platte to Department of the East.
S. O. 4, A. G. O., January 6, 1886.

FIRST-LIEUTENANT W. D. MCCAW, ASSISTANT-SURGEON.—Relieved from duty at Fort Lyon, Colorado, and ordered for duty at Fort Leavenworth, Kansas. S. O. 1, Department of Missouri, January 4, 1886.

LIEUTENANT-COLONEL EBENEZER SWIFT (Retired).—Died near Hamilton, Bermuda, December 24, 1885.